

*Building Expertise in Emerging
Economies: The Benefit of Global
Networks*

MSc in Innovation and Entrepreneurship

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Master thesis

Supervised by
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This thesis is a part of the MSc Innovation and Entrepreneurship program at the University of Oslo.
The University takes no responsibility for the methods used, findings or conclusions drawn.

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ABBREVIATION

MNE = Multinational Enterprises

FDI = Foreign Direct Investment

GNPC = Ghana National Petroleum Cooperation

BPO = Business Process Outsourcing

OfD = Oil for Development

KM = Knowledge Management

SECI = Socialisation/Externalisation/Combination/Internalisation

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I love you all!

Abstract

In October 2005, Ghana National Petroleum Corporation (GNPC) asked for assistance from the Norwegian Ministry of Foreign Affairs Oil for Development program (OfD). The letter was seconded by former UN Secretary General, Mr Kofi Annan. On behalf of the Norwegian government, Minister for International Development, Mr Erik Solheim, responded favourably (Norway 2009). In October 2007, Ghana, through GNPC, applied for assistance from the OfD program. Based on the subsequent dialogue and a thorough assessment of the scope for cooperation, a decision was made to make Ghana a core country in the OfD program. The main research question for this study is: *How can global networks influence emerging economies in building expertise for stimulating domestic entrepreneurship?*

The question is two folded. Firstly, it is looking into the ability of the global community to influence a country, and secondly it looks at the ability that the country itself has to stimulate business development and entrepreneurship. Some relevant perspectives such as institution based-view, knowledge creation and organizational learning are presented in this thesis. The thesis takes a closer look at how the knowledge transfer occurs from consultant agents to the institutions. Particularly focusing on understanding how Norwegian consultants communicate the Norwegian experience to organizations, such as Ghanaian Ministry of Energy, Ghana National Petroleum Cooperation, and the challenges that occur in this process. This study was conducted as a qualitative case study guided by interpretivism using the knowledge creating firm theory as a guiding theory for process analysis. Some important findings are that certain types of knowledge is especially challenging to communicate, and that there has been varying degree of the “quality” of consultants involved in the process, due to uncertainties and organizational structures the ministries and underlying department are subject to knowledge retention and knowledge outflow. Some recommendations have been made, such as increased use of knowledge assets, in terms of podcasts, community of practice, knowledge exchange websites, videos, computer based learning etc. to improve mining of the organizational mind and to increase the speed of the organizational re-learning.

1. INTRODUCTION

1.1 Background to the study

Dagblad et (2011) conducted an interview with Nana Adjaye, leader of the national oil company, Ghana National Petroleum Cooperation (GNPC) where he said “we want knowledge transfer and education of our people; it is not enough to just employ Ghanaians. We want to learn for ourselves, and do it the way Norway once did”. In the same article Marshia Ashong, leader of the Oil Club Ghana, expresses challenges around sourcing competent skill by saying “local content is difficult. The local market does not have the skills yet, so it is difficult to demand that foreign companies have to use local force. It’s a learning curve; the politics have to be developed over time”. Eirik Raude’s senior manager Stein G. Monsholm was asked how many Ghanaian middle managers work on the platform and replied “the platform operates with between 15 -25 local force, none of them are on manager or senior levels. Training takes time, but we hope with time that they would have acquired knowledge to continue on their own. Just like Norway. The government is putting pressure on us”.

A prediction made by both IMF and Economy Watch stated that Ghana would be the fastest growing economy in 2011 (Watch 2011). This has opened the eyes of many, including Norwegian companies. From 21 – 25 November 2011 the Minister of Trade and Industry Trond Giske and the former Minister of the Environment and International Development Erik Solheim invited Norwegian firms for a feasibility study to three African countries to promote investments in Ghana, Angola and Mozambique. Norway opened an embassy in Ghana on 21 November 2011 with the presence of the two ministers along with some 70 Norwegian business leaders. Norwegian interaction with Ghana is expected to rise, whereby Minister Trond Giske made the following statement “parts of Africa are experiencing high economic growth which means good opportunities for Norwegian companies. We will assist those already working in these countries and open doors for those who wish to enter. The possibility of increasing trade with African countries will also be considered” (Regjeringen 2011) The international economist and author Dambisa Moya, (Moyo 2009) argues that FDI will assist in knowledge and technology transfer and “the entrepreneurs (their small and medium-sized enterprises) are the life-blood of any economy, and the crucial emerging private sector in poor countries is the engine for private-sector-led growth”. She further also argues that FDI will “improve management expertise, and aid indigenous firms to open up to the international

markets”. This seems to be the Ghanaian oil and gas industry point of departure, but so far it is unclear how the know-how can and will be transferred in the context of an emerging economy.

Ghanaian stakeholders seem to have identified a challenge of local competence, know-how and management. Some of the key problems the Ghanaians are facing today are the lack in structures and capabilities to manage the oil and gas industry. Because it’s totally new!

There is infrastructure for research and development, but there is little knowledge of business processes and process management in petroleum’s field which is both a technology intensive and capital intensive industry. The Ghanaian society at large is mainly built up on agriculture and minerals (gold). Ghanaians are now looking outwards to the international community to build their expertise and to develop a framework on how to enter the petroleum industry.

Norway had strong demands from an institutional point of view on how foreign companies could operate while at the starting point of its oil era. With the Norwegian motives of sharing this expertise particularly to nations of emerging economies, is it all possible for those countries to follow the exact recipe of the Norwegian model when building capabilities. How can Ghanaian institutions best leverage this knowledge and experience when shaping and developing their own agenda. What are the challenges in communicating these experiences? Can the receivers of this insight relate to what is being communicated? This thesis aims at discussing some of these challenges.

Knowledge management and organizational learning in MNEs has received a lot of attention during the past fifteen years. However, most of the literature is focused on seeing the big picture and formulating overall strategies, thus neglecting the individual perspective. Nonaka and his associates (Nonaka, Byosiene, Borucki & Konno 1994; Nonaka & Takeuchi 1995; Nonaka & Konno 1998; Nonaka & Toyama 2005; Nonaka 2008), on the other hand, have paved way for studies that focus on individuals and how individuals create new knowledge through social collaboration (Lehtonen 2009).

1.2 Objectives of the study

This thesis has the following research question and objectives.

Research question:

How can global networks influence emerging economies in building expertise for stimulating domestic entrepreneurship?

This thesis proposes to answer the research question through the following objectives

- 1) To assess institutions impact on entrepreneurship
- 2) To assess the mechanisms used for transferring knowledge from an established petroleum nation to an emerging petroleum nation
- 3) To identify challenges in the knowledge transfer process

1.3 Motivation

More findings along the West African coast are expected. Norway has developed, in the eyes of many (Dua-Mensah 2009), a successful oil model where the society at large have been able to benefit from the gained revenues in the welfare system and access to services. Norway has developed a state program whereby several consultants are prepared and willing to share their knowledge, competence and expertise to emerging oil nations. The insight from this thesis might be helpful for the development of future knowledge transfer programs. This thesis builds on existing literature on the topic of institutions, organizational learning and knowledge transfer by providing more insight that could be valuable to other researchers and students.

1.4 Lay out of the thesis

This study is divided into six main chapters. The first chapter introduces the research problem and objectives of this study, while the second chapter focuses on previous literature on institutions, knowledge management and organizations. In the third chapter the research methodology and methods are presented and their limitations and advantages evaluated. The fourth chapter describes the research context, findings and analysis. The fifth chapter comprises of discussion. Finally, the sixth chapter concludes the study by presenting suggestions for further research and managerial implications.

2. LITERATURE REVIEW

The literature review is divided into three parts. In the first part, literature on institutions and emerging economies will be presented. The second part focuses on organizational knowledge and learning, and presents current trends in knowledge creation and factors influencing knowledge transfer. Finally, the third part will explain the research approach for this thesis based on the theories and concepts presented in the previous parts.

2.1 Institutions and Emerging Economies

2.1.1 The role of institutions

In international business management, it is argued by Peng (2009) that the institution-based view, covering institutions, cultures, and ethics defines the “rules of the game” (Douglas North) and has a significant impact on how business can and would be conducted. Peng proposes the institutional view as “the third leg of the strategy tripod” that firms need to take into consideration when developing their strategies. The two others are the industry-based view promoted by Michael Porter (Porter 1998) and resource-based view promoted by Jay B. Barney (Barney and Clark 2007).

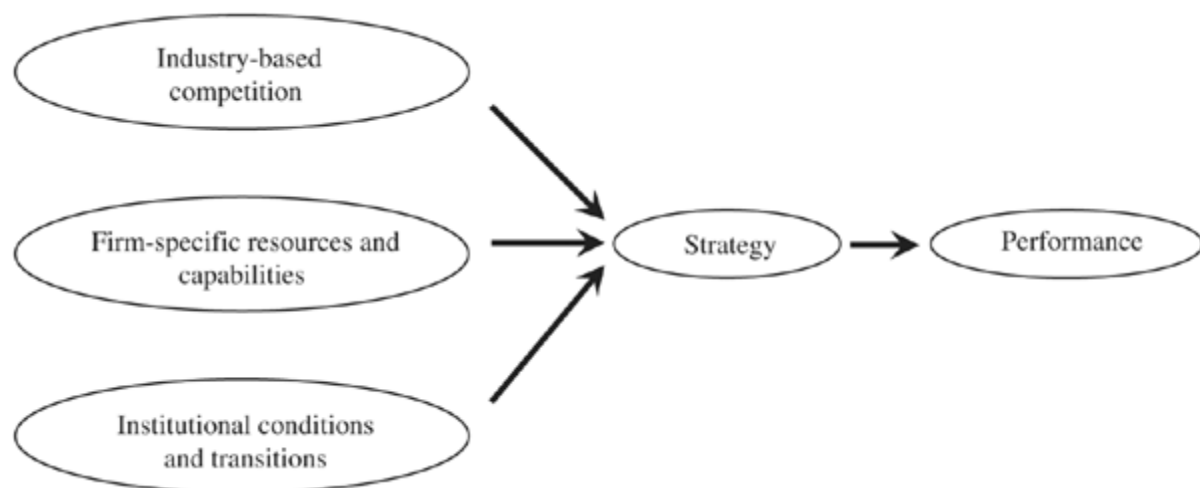


Figure 1: The institution-based view: a third leg of the strategy tripod.

Source: Peng, M.W. (2006) Global Strategy (p. 15).

The key role of institutions is to reduce uncertainty, by signaling which conduct is legitimate and which is not (Peng 2009) and they can either be of the **formal nature** such as laws, regulations and rules or **informal nature** such as norms, cultures and ethics.

In the context of multinational enterprises (MNEs) and their foreign direct investment (FDI) projects it is important that firms “take into account wider influences from sources such as the state and society when crafting strategy” (Peng 2009). Institutions govern societal transactions in the areas of politics (e.g., corruption, transparency), law (e.g., economic liberalization, regulatory regime), and society (e.g., ethical norms, attitudes toward entrepreneurship) (M.W. Peng 2008). An institution-based view of strategy focuses on the dynamic interaction between institutions and organizations, and considers strategic choices as the outcome of such an interaction (see Figure 2)

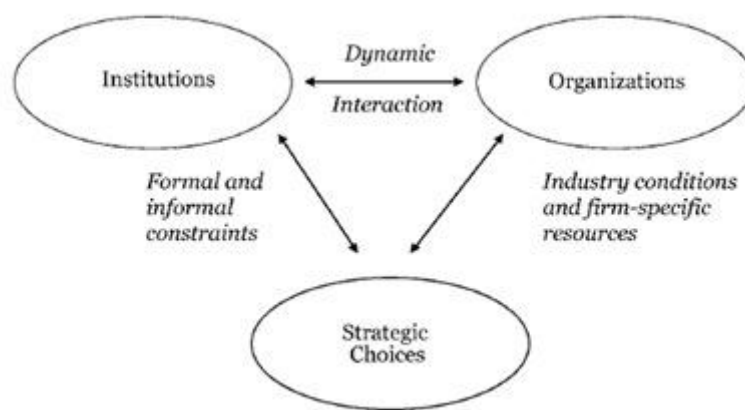


Figure 2: Institutions, firms (organizations) and strategic choice.
Peng (2000). *Business Strategies in Transitions Economies*: p. 45. Thousand Oaks, CA: SAGE

An institution-based answer, among other factors, would point to political, legal, and societal changes in institutions. The industry-based view suggests two core propositions on how institutions matter (Peng 2009):

- 1) Managers and firms *rationaly* pursue their interests and make choice within the formal and informal constraints in a given institutional framework.
- 2) While formal and informal institutions combine to govern firm behavior, in situations where formal constraints are unclear or fail, informal constraints will play a *larger* role in reducing uncertainty and providing constancy to managers and firms

2.1.2 Emerging Economies

Emerging economies are also called ‘emerging country markets’, ‘developing countries’, or ‘transition economies’ “which suggest the need for a better description” (Jansson 2007).

This thesis will use the above mentioned terminologies interchangeably and rest on the definition by Jansson (2007) “Emergent markets are defined as growing markets, which are being transformed from a pre-market economy stage (either a non-pecuniary traditional or centrally planned economy) to the market stage of the mature Western capitalistic economy, by way of integrated and successful structural reforms of companies, markets and society. This movement towards a market economy through a transformation process takes place through a number of stages and at different paces”. Jansson further goes on to describe “some general traits of emerging country market systems are economic growth, complexity, and turbulence. They are volatile due to fast and unexpected ups and downs, as well as undergoing liberalization and privatization of ownership. This is part of a general reformation of the whole society” (Jansson 2007).

Today, this insight becomes more important as more firms do business abroad, especially in emerging economies. The striking institutional differences between developed and emerging economies have propelled the institution-based view to the forefront of strategy discussion (M.W. Peng 2008). In other words, when markets work smoothly in developed economies, “the market-supporting institutions are almost invisible”, and when markets work poorly in emerging economies, “the absence of [strong formal] institutions is conspicuous” into emerging economies whose institutions differ significantly from those in developed economies significantly shape the strategy and performance of firms – both domestic and foreign – in emerging economies (M.W. Peng 2008)

For example, India’s post-1991 economic reforms have made an open, competitive, and entrepreneurial environment possible (Kedia, Mukherjee et al. 2006) thus allowing for the growth in IT/business process outsourcing (BPO) competence. The arrival of Western MNEs in India, in turn, has forced Indian IT/BPO firms to be more competitive. While these competitive interactions are certainly influenced by industry- and resource-based considerations, they are, no doubt, enabled by the market-opening reforms of the Indian government. From an institution-based standpoint, often left unacknowledged are the policies that encourage outward FDI by Western governments. (M.W. Peng 2008).

Institutions failing to ensure efficient functioning of markets are widespread in emerging economies. Formal institutions such as the legal code may be less sophisticated, and – just as important – law enforcement may be inefficient. Local firms may thus rely on network-based coordination mechanisms to overcome various forms of market failure (Peng 2001).

As show in Figure 2, the institution based-view focuses on the interplay between dynamic interaction between institutions and firms. This interactive behavior for FDIs and emerging economies is further supported by Meyer (2004) in Figure 3.

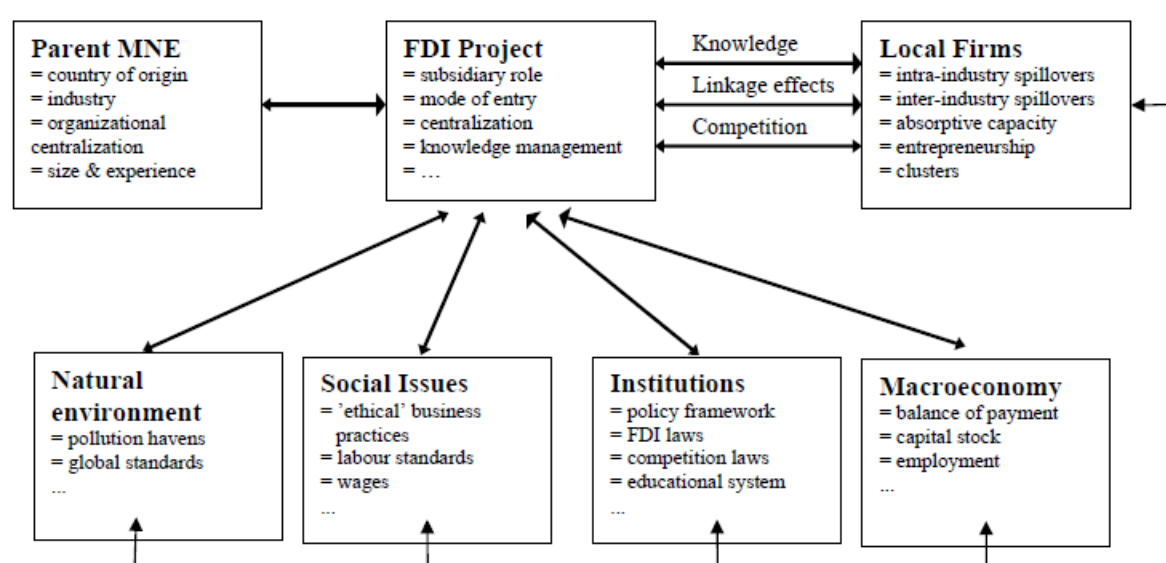


Figure 3: FDI impact on society (Meyer 2004)

Meyer argues “multinational enterprises (MNEs) play a pivotal role in linking rich and poor economies and in transmitting capital, knowledge, ideas and value systems across borders. Their interaction with institutions, organizations and individuals is generating positive and negative spillovers for various groups of stakeholders in both home and host countries”. Foreign investors may influence the institutional development, but at the same time they adjust to local institutions. Moreover, institutions moderate interactions with local firms and individuals (Meyer 2004). Policymakers are influencing the regulatory regime under which both MNEs and local business partners operate. They are interested in understanding how foreign direct investment (FDI) influences economic development and national welfare (Meyer 2004). Informal institutions may be influenced by the living example of businesses based on different values and norms, and even formal institutions may be influenced by governments changing legislation in view of attracting FDI, possibly even under direct

negotiations or lobbying by MNEs. On the other hand, the local environment, and in particular the institutional framework, influences MNEs' entry and subsidiary strategies (Meyer 2004)

M.W. Peng (2008) cites Ingram & Silverman “institutions directly determine what arrows a firm has in its quiver as it struggles to formulate and implement strategy and to create competitive advantage”.

Summary

The key role of institutions is to reduce uncertainty, by signaling which conduct is legitimate and which is not (Peng 2009). The institutions can either be formal (laws, regulations) and informal (norms, cultures and ethics). Institutions define the “rule of the game” and is an important factor particularly in emerging economies. From an institution-based standpoint, often left unacknowledged are the policies that encourage business operations, particularly outward FDI. An institution-based view of strategy focuses on the dynamic interaction between institutions and organizations, and considers strategic choices as the outcome of such interaction. With the support of the international community and MNEs entering Ghana, the formal and informal institutions will be shaped and influenced as a part of such interaction, thus having an effect on local business and entrepreneurship.

2.2 Knowledge in Organizations

The following sections will present various types of knowledge, knowledge creation and learning in organization, and discuss factors impacting knowledge transfer.

The growing interest in knowledge management stems from the realization that in the knowledge era, organizational knowledge is a strategic corporate asset that needs to be garnered, retained, updated, disseminated and applied to future organizational problems (Malhotra 2000). Knowledge management can be defined as the structures, processes, and systems that actively develop, leverage, and transfer knowledge (Peng 2009). Knowledge management in general tries to organize and make available important know-how, wherever and whenever it's needed. This includes processes, procedures, patents, reference works, formulas, best practices, forecasts and fixes (Maglitta 1996).

Knowledge is a fluid mix of framed experience, values, contextual information, and expert insight that provides a framework for evaluating and incorporating new experiences and information. It originates and is applied in the minds of the knower. In organizations, it often

becomes embedded not only in documents or repositories but also in organizational routines, processes, practices, and norms (Davenport and Prusak 1998). The discourse of on what knowledge is being discussed from several schools of thought (Gourlay 2006). This thesis will focus primarily on the discourse in management studies education and knowledge management.

Tacit knowledge

Knowledge can be categorized in two forms whereby tacit knowledge is based on individual insights, experience, and intuitions (Polanyi 1966) and is often difficult to communicate in words or symbols (Gray and Densten 2005). Peng (2009) argues that it is “non codifiable and its acquisition and transfer require hands-on practice. Tacit knowledge is evidently more important and harder to transfer and learning it can be acquired only through learning by doing”.

Explicit knowledge

In contrast, explicit knowledge can be codified, communicated and shared with others, but relies on being tacitly understood and applied (Gray and Densten 2005). Virtually all the knowledge captured, stored, and transmitted by IT is explicit (Peng 2009).

Implicit knowledge

Some scholars also argue that knowledge exist in three forms; not only explicit and tacit but also implicit knowledge. In tacitness lies also implicitness (Li and Gao 2003). Implicit knowledge is something that is known, but is very difficult to verbalize. Implicit knowledge might have the opportunity to become explicit knowledge. Getting to implicit knowledge mandates taking a second look at all the so-called tacit knowledge resources to determine whether that knowledge could be codified if it were subjected to some type of mining and translation process (Frappaolo 2008)

All in all, all knowledge is suggested to be more or less tacit. A wholly explicit knowledge is unthinkable (Polanyi 1966).

2.2.1 Knowledge creation and transfer

Kuznets (1966) highlights the importance of knowledge transfer for economic development by arguing “the essence of modern economic growth is the increase in the stock of useful knowledge and the extension of its application. Since the origins of technical and social

innovation have never been confined to the border of any one nation, the economic growth of all countries depends to some degree on the successful application of a transnational stock of knowledge". The creation and transfer of knowledge in organizations depends on an environment that facilitates communication and experimentation (Davenport and Prusak 1998). Argote, Ingram et al. (2000) argue that "knowledge transfer in organizations occurs through a variety of mechanisms. These mechanisms include personnel movement, training, communication, observation, technology transfer, "reverse engineering" products; replicating routines, patents, scientific publications, and presentations, interactions with suppliers and customers and alliances and other forms of inter-organizational relationships".

Nonaka (1994)'s analogy in the knowledge creating firm theory has received a lot of attention in recent organizational learning and knowledge creation literature. The very famous model is SECI (socialization, externalization, combination, internalization), which is widely accepted and several authors considered that this model achieved paradigmatic status (Gourlay, 2006).

Nonaka et al. argue that knowledge is initially created by individuals and that the knowledge created by individuals becomes organizational knowledge through a process (McLean 2002). The SECI knowledge-conversion model put forth by Nonaka et al. in *The Knowledge Creating Company* (Nonaka 1994) describe how Nonaka et al. conceptualized the knowledge creation as a process in which various contradictions are synthesized through dynamic interactions among individuals, the organization, and the environment. They argue that knowledge is created in a spiral that integrates opposing concepts 'such as order and chaos, micro and macro, part and whole, mind and body, tacit and explicit, self and other deduction and induction, and creativity and efficiency' (see Figure 4). The approach focuses on the flow of knowledge which originates within individuals and is then made available to others in the organization. The process relates to the conversion of tacit into explicit knowledge and is consistent with the view that 'knowledge is a phenomenon in motion' (Gray and Densten 2005).

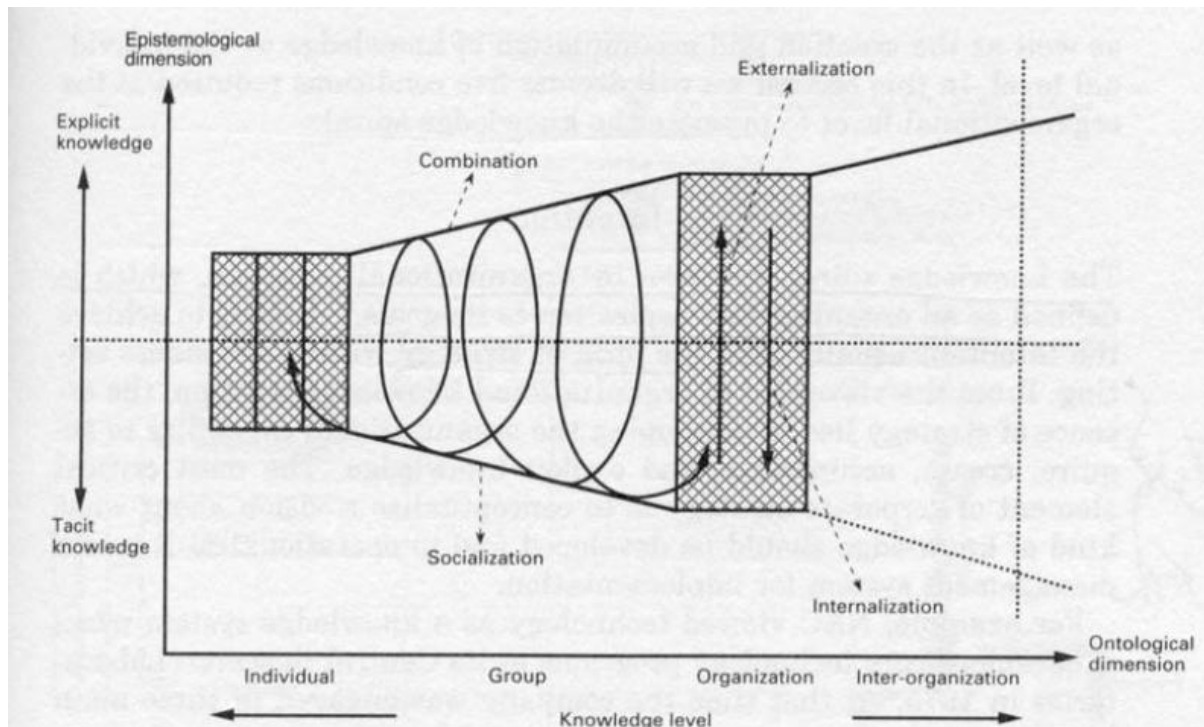


Figure 4: The spiral of organizational knowledge creation (Nonaka 1994)

Nonaka et al. propose that such creation involves passing through several ‘ontological’ levels, i.e., individual, group, organizational, and inter-organizational levels in order to be effective for all people and for a whole organization. According to Nonaka et al. knowledge is created and transformed ‘spirally’ from the individual level to the organizational level and finally between organizations. The focus in Nonaka et al.’s model is on activity surrounding creation of knowledge and not only on knowledge in itself (Paavola and Hakkarainen 2005)

Socialization

The first phase “is the process of converting new tacit knowledge through shared experiences” (Nonaka et. al.) from tacit knowledge to tacit knowledge. Nonaka et al. call this phase socialization, by sharing and learning to understand tacit knowledge through participating in an expert community. The individual perceive the reality as it is and empathizing with others and the environment. Nonaka et al. argue that in this phase knowledge is most difficult to share and formalize because of its tacit nature.

Externalization

In the second phase is externalization. The tacit knowledge is converted to explicit knowledge by transforming tacit knowledge in a public form. It can be articulated through

dialogue and reflection using symbolic language and translating tacit knowledge into a concepts, design or prototypes (Nonaka et al.).

Combination

The third phase is the combination phase. In this phase systemizing and applying explicit knowledge and information occur. The existing explicit knowledge transforms into more complex explicit knowledge by gathering information from inside and outside the organization. Breaking down the concepts and finding relationship among concepts. It becomes synthesizing expert knowledge (Nonaka et al.).

Internalization

The fourth and final phase is internalization, where explicit knowledge is converted back to tacit knowledge through action and practice. Embodying explicit knowledge through action and reflection where the knowledge becomes internalized and learning to master expert knowledge through sustained practices (Nonaka et al.).

Other scholars have also shared the concept of a four step model of knowledge creation process that seems to be similar to the process described by Nonaka et al.

Li, D'Souza et al. (2011) refer to Watkins and Marsick who proposed that learning could occur at four levels: individual, team, organizational, and society, the same as Nonaka et al. four ontological levels. Researchers who study learning in organizations have suggested that we need to address learning at all three levels if we want to understand its implications in an organizational context. Higher level (team and organizational level) learning cannot occur without the existence of individual learners (Baxter, Connolly et al. 2009). The individual's cognitive process (such as inquiry and reflection) drives knowledge creation and learning. Yet, without connection to the team and the organizational context, what was learned will lose its meaning and support of the contextual environment. Crossan, Lane et al. (1999) go a step further and propose that four board processes link the three levels of learning. These are intuiting, interpreting, integrating, and institutionalizing, similar to Nonaka et. al.'s SECI model. For example, consider the situation in which an individual working on intuiting and interpreting processes suddenly finds it difficult to transform the newly learned material to achieve performance enhancements. The individual must then seek the assistance of the team to aid with the integration of the new learning and then institutionalize the new knowledge at the organizational level. Situated learning theory posits that learning and knowledge

construction cannot be conceived easily in the abstract form and that they need to be presented in an authenticated context (Li, D'Souza et al. 2011)

Huber (1991) defines a behavioral measure for organizational learning and argues that “an entity learns if, through its processing of information, the range of its potential behaviors is changed. This definition holds whether the entity is a human or other animal, a group, an organization, an industry, or a society. The information processing can involve acquiring, distributing or interpreting information.” When the entity is an organization, these processes are frequently interpersonal or social, but they are occasionally more mechanical, and they can often be usefully viewed as logistical processes”. Huber further presents a process of “four constructs integrally linked to organizational learning”; *Knowledge acquisition* is the process by which knowledge is obtained. *Information distribution* is the process by which information from different sources is shared and thereby leads to new information or understanding. *Information interpretation* is the process by which distributed information is given one or more commonly understood interpretations. *Organizational memory* is the means by which knowledge is stored for future use (Huber 1991). These four steps are also quit similar to Nonaka et. al’s SECI model.

Theorist/Phases	1	2	3	4
Huber	Knowledge acquisition	Information distribution	Information interpretation	Organizational memory
Nonaka et al.	Socialization	Externalization	Combination	Internalization
Crossan et al.	Intuiting	Interpreting	Integrating	Institutionalizing

Table 1: Steps in organizational learning

Critique of the Knowledge Creating Firm Theory

The theory of the knowledge creating firm has also received some critique (Gourlay (2006); Becerra-Fernandez and Sabherwal (2001); Holden (2003); Engestrom (1999) ; Powell (2007)) arguing that the theory has, several flaws, is incomplete in its descriptions and even not generalizable from the Japanese experience to the west. This section will present some of these critiques.

Powell (2007) argues that Nonaka (1994)’s SECI framework is fundamentally flawed and incomplete. While it is disappointing that such a pervasive framework is flawed, its establishment as a paradigm can still be seen as positive (Powell 2007).

Gourlay (2006) cites Bereiter by arguing that Nonaka's model does not explain how new ideas are produced, nor how depth of understanding (necessary for expertise) develops. Further, their model of knowledge work is unconvincing, and they make collaborative work a mystery. Referring to a bread-machine analogy used by Nonaka et. al as empirical evidence for explaining the externalization phase, Gourlay says "the designers did not "externalize" the chef's bread-making knowledge into their machine; they transformed the problem into one that could be handled by a particular kind of machine. It is therefore not necessary to postulate tacit-to-tacit and tacit-to-explicit knowledge transformations when we can more simply refer to learning by doing on the one hand, and to designing new tasks on the other. Research along some of the lines indicated above may well validate the ideas of socialization and externalization. Socialization and combination, however, are modes of knowledge transfer, the former concerning how one person or group acquires the tacit knowledge of others, and the latter the transfer of already existing explicit knowledge between containers (people, documents, computers) (Gourlay 2006).

Gourlay (2006) gives reference to others who "claim with equal conviction that at least some tacit knowledge cannot be made explicit", so a model of knowledge creation processes that begins with tacit knowledge must therefore account in some way for both inherently and contingently tacit knowledge, an issue that needs addressing if Nonaka's hypothesis about knowledge creation is to be defended (Gourlay 2006).

Other scholars such as McLean have another take on Nonaka et al.'s theory. The theory has been well-conceptualized drawing upon extensive review of the literature and significant data from the field in the form of case studies. In its current state, the theory is important and has been articulated to be precise and clear and has the potential to be fruitful in contributing to the existing body of knowledge on organizational knowledge creation. However, to take the theory to the next level of maturation, the theory needs to be operationalized and an aggressive research agenda needs to be undertaken to work towards confirmation or disconfirmation of the theory (McLean 2002). McLean has concluded that the theory of organizational knowledge creation put forth by Nonaka and Takeuchi (1995) is indeed a theory, but it is an emerging one that will grow more robust over time (McLean 2002) As Kuhn (1962) notes, by "focusing attention upon a small range of relatively esoteric problems, the paradigm forces scientists to investigate some part of nature in a detail and depth that would otherwise be unimaginable".

While critics have claimed that the theory lacks empirical validity, and that the duality of tacit and explicit knowledge is hard to study, Nonaka and his associates' seminal work in the field of knowledge management helps us to better see how people share and create knowledge. However, the theoretical framework does not reveal why people share knowledge nor can it be regarded as the only theory of knowledge-creation (Lehtonen 2009).

Summary

Organizational knowledge creation and learning can be analyzed as a four step process where knowledge moves through several ontological levels such as individual, team, organization and environment (inter-organization). The knowledge flows between two epistemological dimensions, tacit and explicit. Some scholars argue that there is an intermediate stage called implicit. The knowledge creating firm theory put forth by Nonaka et. al. has received some critique, but nonetheless the theory represent a paradigm shift in how knowledge transfer is viewed and some scholars argue it is a valid theory but an immature one.

2.2.2 Knowledge assets and repositories

In able to tap into a knowledge resource it must be retrievable. These retrievable sources are referred to as assets and repositories. Knowledge assets – both ideas or concepts and know-how are created through the computerized collection, storage, sharing, and linking of corporate knowledge pools. Advanced technology makes it possible to mine the corporate mind (Malhotra 2000). Technologically, intranets, groupware, data warehouses, networks, bulletin boards, videoconferencing, community of practice (Wenger 2006) and knowledge reservoirs (Widding 2007) are key tools for storing and distributing this intelligence (Maglitta 1996).

Experiential Knowledge Assets Tacit knowledge shared through common experiences <ul style="list-style-type: none"> • Skills and know-how of individuals • Care, love, trust, and security • Energy, passion, and tension 	Conceptual Knowledge Assets Explicit knowledge articulated through images, symbols, and language <ul style="list-style-type: none"> • Product concepts • Design • Brand equity
Routine Knowledge Assets Tacit knowledge routinised and embedded in actions and practices <ul style="list-style-type: none"> • Know-how in daily operations • Organisational routines • Organisational culture 	Systemic Knowledge Assets Systemised and packaged explicit knowledge <ul style="list-style-type: none"> • Documents, specifications, manuals • Database • Patents and licenses

Figure 5: Four categories of knowledge assets (Nonaka, Toyama et al. 2000)

Nonaka et al. divide knowledge assets into four categories corresponding the various phases in the SECI model. First category, experiential knowledge assets, consists of explicit knowledge expressed as hands-on skills and emotional knowledge. Experiential knowledge is tacit in its nature and Nonaka et al. point out that it is difficult for competitors to imitate. Conceptual knowledge assets form the second category and they are explicit and communicated through symbols and visuals. Third, systemic knowledge assets contain systematized knowledge such as product specifications and employee manuals. The fourth, and last, category contains routine knowledge assets which, as the concept suggests, contain tacit knowledge regarded as routines in a given organization.

Summary

Advanced technology has made it possible to mine the corporate mind, so that concepts, ideas, and know-how can be stored into what is referred to as knowledge assets or repositories. According to Nonaka et. al. the types knowledge assert varies with its tacitness, whether it is codified into a technology such as document, groupware or patents, or concept, design or an emotion. There a knowledge asset for each phase of SECI model: experiential knowledge asset, conceptual knowledge asset, systemic knowledge asset, routine knowledge asset.

2.2.3 Factors influencing knowledge transfer

Knowledge transfer is defined by (Kumar and Ganesh 2009) as activities of exchanging explicit or tacit knowledge between two agents, during which one agent receive and apply the knowledge provided by the other agent. The agents could be an individual, team/department or an organization (Joshi, Sarker et al. 2007). However, the ease of transferring knowledge from one individual to others can be affected by many factors (Al-Salti and Hackney 2011). There are important differences between business and public sector organizations that impact the ways in which these organizations can learn. Business organizations generally work under market conditions, in which profit, sales and expenditure figures constitute a set of relatively straight-forward indicators guiding decision-making and learning. Public Sector Organizations generally work under bureaucratic or hybrid conditions, in which departmental governance, political rules, regulations and pressures, sudden public events, annual budgets and private-public interdependencies constitute a set of relatively complex and ambiguous indicators guiding decision-making and learning (Gilson, Dunleavy et al. 2009)

Tacitness

Polanyi (1966) outlined the fact that “we know more than we can say”, introducing thus the tacit dimension of knowledge, the one that comprises intuition, beliefs, values, skills, ideals, lessons learned from practice. On the other hand the explicit dimension is represented by the knowledge gained through education, knowledge that can be easily articulated and transferred to others (Năftănăilă 2010). The size and the nature of the gap of knowledge between source and recipient is one example (Leornard, 2007) of challenge in knowledge transfer. Knowledge has a very subjective nature. What may constitute knowledge for one person, can constitute information or even data for another person. In order for information to be transformed into knowledge the stimuli received has to encounter some prerequisite knowledge, present in the receiver’s memory, in order to decode the stimuli received. For example, when an expert is trying to transfer his knowledge to a novice colleague, the transfer process can be difficult because of the lack of receptors to decode the stimuli received from the emitter (Năftănăilă 2010).

In addition, since tacit knowledge is embedded in social and cultural context (Roberts 2000), thus knowledge transfer will become a challenge to transfer a cross-border (Kugot and Zander 1993). Codified knowledge, with appropriate contractual arrangements, may be transferred in a tangible embodiment or blue prints or patents. Tacit knowledge requires time to acquire (Roberts 2000). Garavelli et. al. (2001) suggests that knowledge transfer failures are

attributable to either failures of codification, or failures of interpretation, two points at which a ‘cognitive system’ is involved in knowledge transfers.

Knowledge-based trust

At the individual level, one of the most important factors affecting the knowledge transfer process is *trust*. Most people are unlikely to share their knowledge and experience without a feeling of trust. People must have the feeling of trust that the people will not misuse their knowledge, and that the information that one receives is accurate and credible due to the source of information (De Long and Fahey 2000), it is derived through getting to know the other individual and being able to predict his/her behavior (Ford 2003). Trust among individuals is an important factor to establish motivation favorable to knowledge transfer (Strach and Everett 2006).

Institution- based trust

The level of trust that exists between the organization, its subunits, and its employees greatly influences the amount of knowledge that flows both between individuals and from individuals into the firm’s databases, best practices achieves and other records (De Long and Fahey 2000). Institution-based trust is built upon the belief that “necessary structures are in place which will ensure trustworthy behavior of individual members, and protect the members from negative consequences of administrative and procedural mistakes” (Ardichvili, Page et al. 2003). Thinking more specifically about the context for government agencies Leeuw, Rist et al. (1995) argue that:

- Governments are often far more receptive to information generated internally rather than externally.
- There is a positive correlation between the credibility of the source originating new information and the acceptance of information – it must be seen to be coming from a legitimate source. For example, whistle blowers and special interest groups are much less likely to be ignored.
- The legitimacy of inter-institutional scrutiny is greater in government than in the private sector
- The credibility of the internal receiver is important. Because governments and civil services are hierarchical, the receiver of new information must be seen to be credible, and to have access to those who have decision making responsibilities.

- Information that is conveyed in more formats than a formal report has a better chance of being acted on – so that informal contacts and a ‘no surprises’ policy being pursued by evaluators can be very important in securing the reception of message.
- Efforts to the contexts for policy-making change continuously, learning should also never finish.

Learning Intent

The transfer of knowledge depends not only on the characteristics of the knowledge transferred but also on the learning intent, absorptive capacity and motivation of the recipient of knowledge. Learning intent is the extent to which the receipt has the potential to learn and acquire new knowledge and skills proposed by the source (Tsang 2002). Huber (1991) cites Friedlander (1983) by arguing that “change resulting from learning need not be visibly behavioral. Learning may result in new and significant insights and awareness that dictate no behavioral change. In this sense the crucial element in learning is that the organism be consciously aware of differences and alternatives and have consciously chosen one of these alternatives. The choice may be not to reconstruct behavior but, rather, to change one's cognitive maps or understandings.

Absorption Capacity

Absorptive capacity is defined as the ability of the recipient to recognize the value of the new knowledge provided by the source, assimilate it and apply it to business ends (Schmidt 2010). Zahra and George (2002) found that *lack of absorptive capability* is one of the primary factors that hamper knowledge transfer success. The underlying premise is that a recipient's stock of prior related knowledge and experience is essential to effectively absorb and utilize external knowledge (Srivardhana and Pawlowski 2007). Peng (2009) refers to “knowledge inflow” that is related to absorption capacity, where attitudes such as a “not invented here”-syndrome meaning that receiver refuses utilize useful knowledge because it did not come from within.

Physical Distance

Physical distance refers to the difficulty, time requirement and expense of communicating and getting together face-to-face (Cummings and Teng, 2003). In this context Peng (2009) refers to knowledge transmission as communication through inappropriate channels for example IP telephony where the line breaks down and messages get blurred.

Organizational Culture Distance

Organizational culture distance is the extent to which the source and the receipt of knowledge possess different work values, ideologies, norms and, problem-solving approaches (Ko *et al.*, 2005). Difficulties in knowledge transfer tend to arise when there are differences in organizational culture. Culture resides in the values, beliefs, and assumptions, norms that people have and use every day to guide their work; it also influences the dynamics of how people perform, relate and perceive the project's impact on their work. De Long and Fahey (2000) suggest that culture influences behavior central to knowledge creation, sharing, and use in several ways. First, culture shapes assumptions about what knowledge is worth exchanging and also defines relationships between individual and organizational knowledge, determining who is expected to control specific knowledge, as well as who must share it. Last but not least, culture creates the context for social interaction that determines how knowledge will be shared in particular situations shaping the processes by which new knowledge is created, legitimated, and distributed in organizations (Năftănăilă 2010). Peng (2009) uses the term knowledge outflow when there is a challenge with outbound sharing of knowledge, such as “knowledge is power” –mentality.

National Culture Distance

National culture distance is when the source and the recipient of knowledge lack a common language, values, beliefs and cultural background understanding (Narteh 2008).

Power distance

In countries that have small power distance, the superior and the employees work in closer terms and consult each other. When superiors and employees working together they consider each other as less equal even though the positions and educational background is different. The organizations in a less power culture have a tendency to be flat and decentralized. Unequal treatment of the positions is low. In contrast in a larger power distance the organization is more centralized, and decisions usually come from above in the hierarchy. (Nguyen 2007).

Knowledge retention

Peng (2009) describe knowledge retention when there is an employee turnover and knowledge leaks or leaves the company. This is also referred to as spillovers where for example individuals leaving a foreign-owned affiliate to establish their own business. I can generate potentially large spillovers. Studies of successful local firms find that many entrepreneurs or top managers had prior links to MNEs. Hence the movement of employees

may not be large in terms of the number of individuals involved, but those that leave may have a substantive impact if as entrepreneurs they set up their own businesses (Meyer 2004).

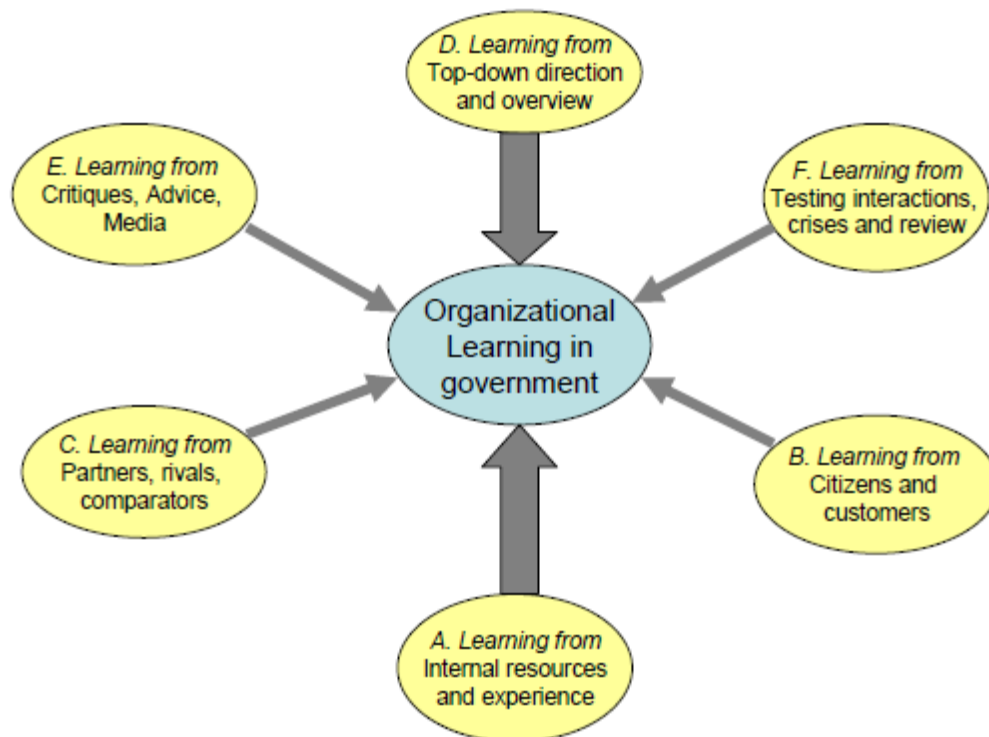


Figure 6: The main sources of organizational learning in governments (Gilson, Dunleavy et al. 2009)

Summary

Knowledge transfer can be influenced by many factors such as tacitness, distance (cultural, physical, and geographical) and many other factors. The various factors varies from traits and attitudes in the individuals such as the ability to recognize knowledge to traits in the organizations such organizational culture and trust.

2.2.4 Learning environments

Clarifying the managerial leadership roles that assist in the development of a knowledge creating and sharing culture could have important implications for organizational change and development. Leaders face great challenges as the initiators of change in bringing about organizational development (Gray and Densten 2005).

Paavola and Hakkarainen (2005) refer to Bereiter who argue that knowledge-building processes should involve working at the edge of one's competence, progressively setting up higher standards of performance, and seeking collective knowledge advancement beyond individual learning. Bereiter argued that setting up of a community that is deliberately focused on going beyond the limits of existing knowledge, is essential to knowledge creation (Paavola and Hakkarainen 2005).

Knowledge needs a physical context to be created. As stated previously, knowledge is context-specific, as it depends on particular time and space (Hayek, 1945). Knowledge does not just exist in one's cognition. Rather, it is created in situated action (Suchman, 1987). In this thesis, the conceptualization of *ba* is extended to cover the interdependent interaction between agents and structures. Thus, *ba* is a continuously created generative mechanism that explains the potentialities and tendencies that either hinder or stimulate knowledge creative activities (Nonaka and Toyama 2003). In short, *ba* is a "shared space for emerging relationships" (Nonaka, Toyama et al. 2000) and the space here can refer to either physical (e.g. office premises), virtual (e.g. online communities), mental space (such as ideas and ideals) or any combination formed from them (Nonaka & Konno 1998). There are a total of four types of *ba* that correspond to the four stages of the SECI model. These characterizations are as follows (see Figure 7): Originating *ba* in the socialisation phase, Dialoguing *ba* in the externalisation phase, Systemising *ba* in the combination phase and Exercising *ba* in the internalisation phase. Different *bas* aim at speeding up knowledge creation and manager's role is to nurture and develop these *bas* (Nonaka et al. 2000).

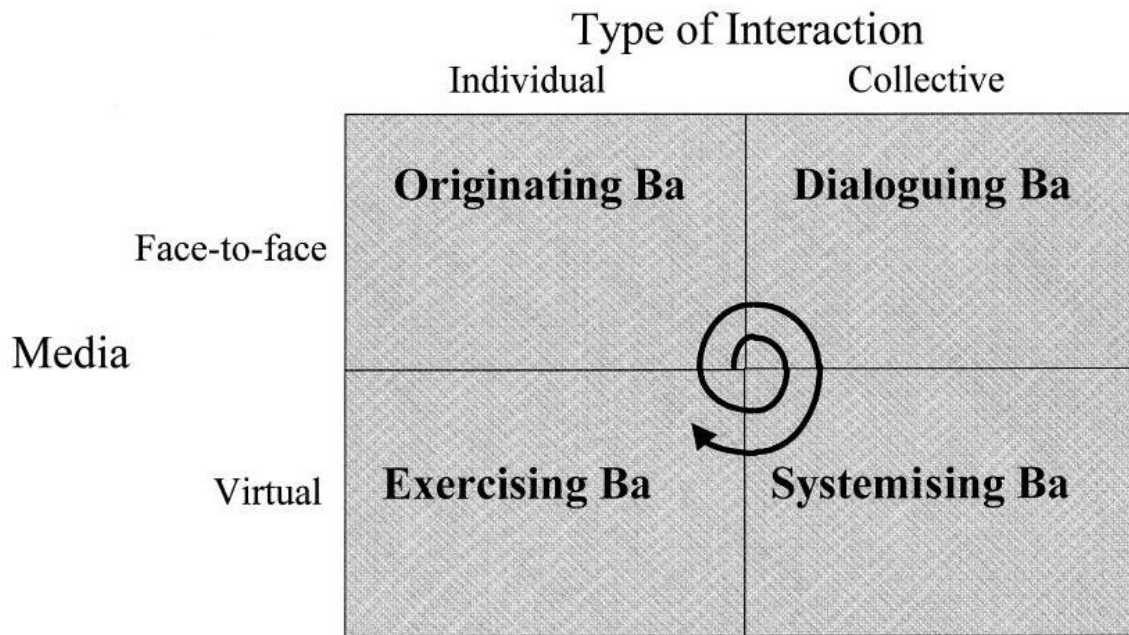


Figure 7: Four types of ba (Nonaka, Toyama et al. 2000)

Nonaka & Konno (1998) argue that knowledge is created in shared contexts, *bas*, and they can exist in every organizational level. They state that “to participate in a *ba* means to get involved and transcend one’s own limited perspective or boundary” (Nonaka & Konno 1998). Thus, like culture, *ba* is a visualization of processes occurring between individuals or groups of individuals (see Figure 8).

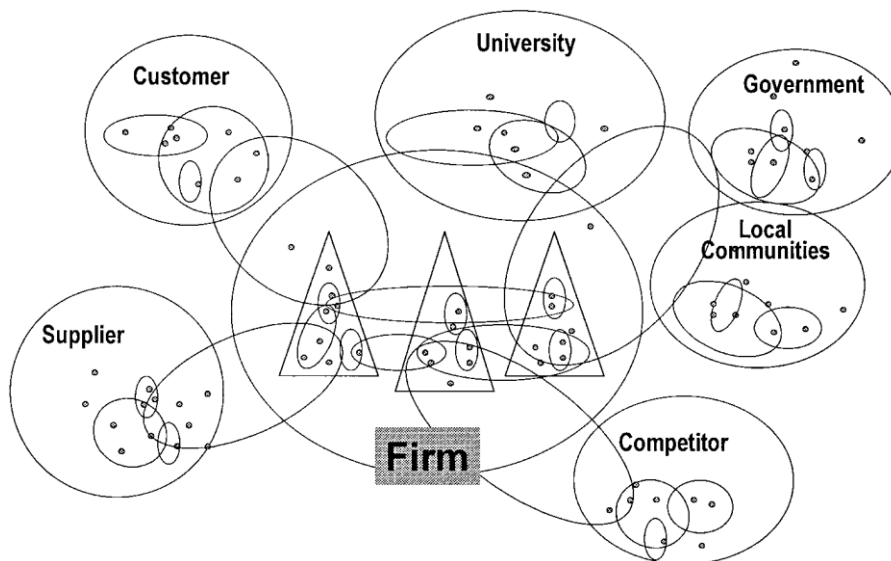


Figure 8: Organization as organic configuration of ba (Nonaka and Toyama 2003)

Summary

For the knowledge transfer to take place there must be a shared space that would allow this to happen it can be a physical office space, online community or mental space such, Nonaka et al. refer to these spaces as *bas*. There is a *ba* corresponding to each phase of the SECI four step model: originating *ba*, dialoguing *ba*, systemizing *ba*, exercising *ba*.

2.3 Theoretical approach for this research

The main research question for this study is “How can global networks influence emerging economies in building expertise for stimulating domestic entrepreneurship?” The question is two folded. Firstly, it is looking into the ability of the global community to influence a country, and secondly it looks at the ability that the country itself has to stimulate business development and entrepreneurship. Some relevant perspectives responding to this duality has been argued for through the literature review. This thesis aims at giving an understanding about how consultants share their knowledge in institution building and development. The thesis takes a closer look at how the knowledge transfer occurs from consultant agents to the institutions. Particularly focusing on understanding how Norwegian consultants communicate the Norwegian experience to organizations, such as Ghanaian Ministry of Energy, Ghana National Petroleum Cooperation, and the challenges that occur in this process.

In this thesis I have made an attempt to synthesis the theoretical perspective of Nonaka et al. in the knowledge creating firm theory and factors affecting knowledge transfer presented by other scholars. This is done with the aim of bridging the gap between the knowledge sharing process and looking closer into what factor affect knowledge transfer which might not be adequately explained by Nonaka et al.’s theory (see critique section above).

The knowledge creating firm theory has little empirical evidence form outside of Japan and particularly not from a context where the organization is not profit driven, even though it can be argued that governments’ motivation also is economic development.

Nonaka et al propose that knowledge creation occur on four levels (see Figure 3): individual, group, organization, and inter-organization, in a spiral of interactions between the entities. This view is also supported by several other scholars as presented earlier. Argote, Ingram et al. (2000) argue that knowledge transfer occurs through a variety of mechanisms, such as training, communication, observation and alliances and other forms of inter-organizational

relationships. The inter-organizational relationship between agents in Norway and Ghana will be the focus of this study.

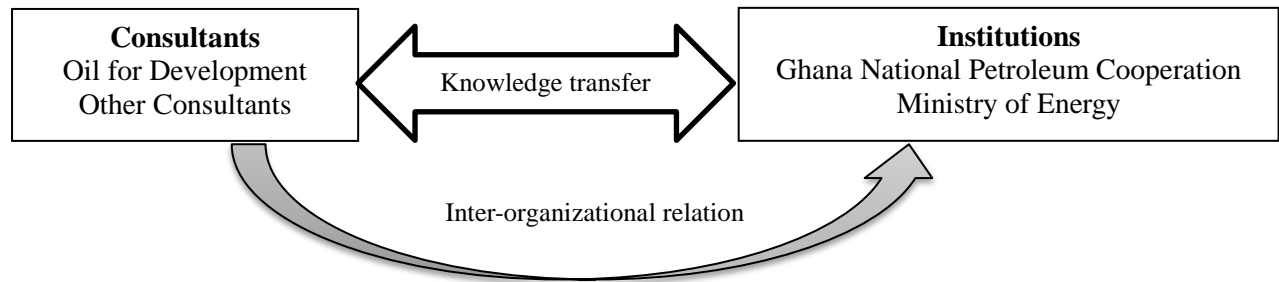


Figure 9: Research perspective

In the analogy of Nonaka's et al. spiral of knowledge diffusion (see Figure 3), the last ontological dimension is the inter-organization interaction, whereby knowledge is spread to other organizations and "picked up" by individuals through interaction in "shared spaces" called *bas* (Nonaka et al.). The knowledge is then diffused to another organization with a new repeating cycle and the spiral of knowledge diffusion continues in the new organization through the interactions on the various epistemological and ontological levels.

The relationship between the elements of *ba* and SECI is illustrated by Figure 10 below.

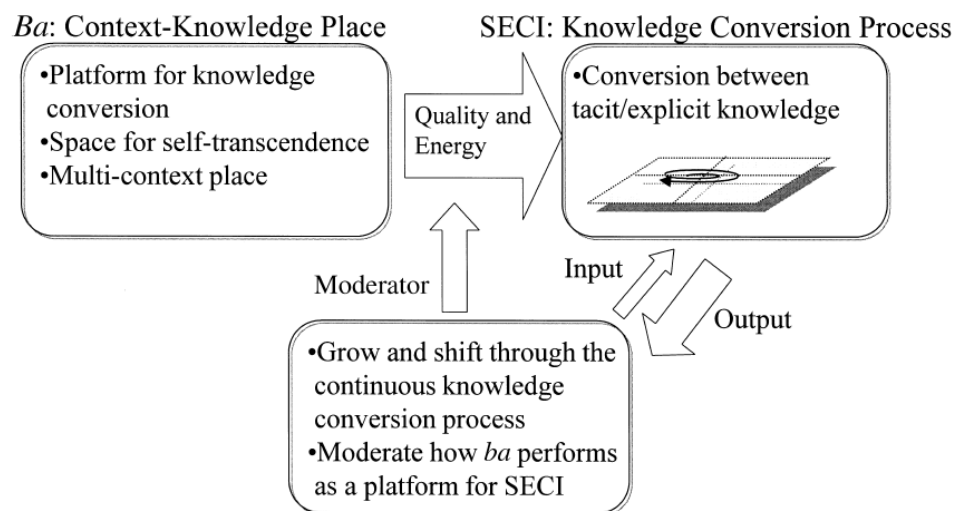


Figure 10: Three elements of the knowledge-creating process (Nonaka, Toyama et al. 2000)

3. RESEARCH METHODOLOGY

3.1 Introduction

The purpose of this section is to illustrate the methodology and methods for how this research was conducted. This section will also present the data collection processes and how the data was analyzed and its overall fit with the research agenda presented in the previous section.

3.2 Qualitative Study

This study is of qualitative nature because the nature of Nonaka et. al's (Nonaka 1994) work cannot be operationalized to produce quantitative results. Analyzing the different characteristics of *ba* (Nonaka et al. 2000), for example, would not be possible by using only surveys or questionnaires. In addition, this study attempts to shed light and seeks understanding on factors related to knowledge transfer (Yin 2009).

Cited from Lehtonen (2009), distance presents challenges in international business research and that is what distinguishes the discipline of international business from business discipline. On the other hand, actors in the field of international business experience distance because of political, geographical, cultural or linguistic factors but distance is also present when dealing with the interplay between the researcher and the object of study. Furthermore, since knowledge involves narratives, social interaction, belief (Nonaka 1994) and artifacts (Kreiner 2002), a qualitative study seem to be most appropriate for this study.

3.3 Research Design

Case Study Design

The design for this research is a holistic (single unit of analysis) single-case design (Yin 2009). A single case, meeting all of the conditions for testing the theory, can confirm, challenge, or extend the theory. The single case can then be used to determine whether a theory's propositions are correct or whether some alternative set of explanation might be more relevant. A second rationale for a single case is where the case represents an *extreme* case or a *unique* case (Yin 2009). The relation between Norway and Ghana can be considered unique in a way that a relation between Norway and Angola or Norway and Benin might reveal other challenges in the knowledge transfer process even though Ghana, Angola and Benin are all considered emerging economies. Examples of difference between these

countries are languages since Portuguese and French are working languages in Angola and Benin respectively, while in Ghana it is English due to the different colonial history. Another uniqueness to this case is the timing of when Ghana discovered the oil resource and where they are in the development and commercialization process and availability of resources such as financial, humans, infrastructure and much more. These elements might affect the nature of response from the informants. Due to the above mentioned elements it might be challenging to generalize the results of the findings from this research.

This study combines perspectives from interpretivism (Walsham 1995) and case study (Yin 2009) approaches. Case study according to (Yin 2003) is used in “examining contemporary events, when the relevant behaviors cannot be manipulated”, which is in line with the nature of this study. This approach relies on multiple sources of evidence to add breadth and depth to data collection, to assist in bringing a richness of data together to contribute to the validity of the research (Yin 2003).

The interpretive case study according to Walsham (1995) rests on the belief that “our knowledge of reality is a social construction by human actors”, and “value-free data cannot be obtained, since the enquirer uses his or her preconceptions in order to guide the process of enquiry and the researcher interacts with the human subjects of the enquiry, changing the perceptions of both parties”. While the interpretive approach is said to provide understandings rather than prescriptions (Walsham 1995), the research relies also on the qualitative research tradition that according to Iivari (2010) is characterized as “a situated activity that locates the observer in the world. It consists of a set of interpretive, material practices that make the world visible”.

Van Maanen (1979), writing in the tradition of organizational ethnography, calls the interviewee's constructions first-order data and the constructions of the researcher second-order concepts. He warns that assuming an ethnographic stance is not a guarantee that researchers will collect valuable data no matter how long they stay in the field. Second-order concepts rely on good theory and insightful analysis, and mere collection of in-depth case.

A key question for researchers in any tradition, regardless of philosophical stance, concerns the role of theory in their research (Walsham 1995). Eisenhardt (1989) discusses this issue in the context of organizational research, and identifies three distinct uses of theory: as an initial guide to design and data collection; as part of an iterative process of data collection and analysis; and as a final product of the research. The motivation for the use of theory in the

earlier stages of interpretive cases studies is to create an initial theoretical framework which takes account of previous knowledge, and which creates a sensible theoretical basis to inform the topics and approach of the early empirical work (Walsham 1995).

This study will be conducted from an interpretive case study perspective, and is guided by a theoretical framework developed from concepts of knowledge creation, knowledge transfer and organizational learning by Nonaka et al., but also includes perspectives by other scholars to understand factors impacting knowledge transfer, particularly where the knowledge creating-firm theory do not offer in depth explanations.

Although theory can provide a valuable initial guide as described above, there is a danger of the researcher only seeing what the theory suggests, and thus using the theory in a rigid way which stifles potential new issues and avenues of exploration. It is desirable in interpretive studies to preserve a considerable degree of openness to the field data, and a willingness to modify initial assumptions and theories. This results in an iterative process of data collection and analysis, with initial theories being expanded, revised, or abandoned altogether (Walsham 1995).

Interpretive researchers are not saying to the reader that they are reporting facts; instead, they are reporting their interpretations of other people's interpretations. It is thus vital, in order to establish some credibility to the reader, that they describe in some detail how they have arrived at their 'results'. As a minimum, reporting on the collection of field data should include details of the research sites chosen, the reasons for this choice, the number of people who were interviewed, what hierarchical or professional positions they occupied, what other data sources were used, and over what period the research was conducted. With respect to data analysis, reporting should include how the field interviews and other data were recorded, how they were analyzed and how the iterative process between field data and theory took place and evolved over time (Walsham 1995).

3.3.1 Unit of analysis

The unity of analysis in this study is the institutional knowledge exchange from Norway to Ghana, by investigating the perceived reality of the Norwegian consultants interacting with the Ministry of Energy and Ghana National Petroleum Cooperation.

The consultants were chosen based on the following characteristics: A track record of engagement in consultancy work in Ghana related to the petroleum's field.

The informants were as follows:

Informant 1

The informant is a special advisor in an advisory organization within the petroleum industry established by the Norwegian Oil and Gas industry and the Norwegian government in 1997. The company's head office is in Norway and the company has several international offices working in partnership with local businesses. The company is a network-based organization where the partners exchange experience and knowledge of market developments internationally. The organization encourages active dialogue between oil companies, technology suppliers, service companies and governments. The Norwegian Government actively supports the organization's initiatives, and the activities are financed jointly by the industry and the government. The informant has more than 25 years of experience from the oil and gas sector, and has served as a senior advisor for Statoil, Manager Director of Statoil (UK) Ltd. and more. The informant has experience from Ghana and conducts lectures with Ministry of Energy and GNPC. He is a well renowned international consultant in the petroleum's field.

Informant 2

The informant is a business developer and works for an international independent petroleum company with headquarter in Oslo. The company is engaged in the acquisition, exploration, development and operation of oil and natural gas properties. The company serves as operator or active license partner in several production and exploration assets in Peru, Colombia, and Ghana. The informant has been a State Secretary for the Ministries of Industry and Oil and Energy in Norway, and has been engaged as a consultant by the current vice president of Ghana based on this experience. The informant has more than 25 years of business experience in Ghana and does consulting, workshops, lectures and advisory for the Ministry of Energy and GNPC.

Informant 3

The informant works as a senior advisor for Norad in the Oil for Development program (OfD). The program was launched by the Norwegian Government in 2005. The operative goal of the program is "economically, environmentally and socially responsible management of petroleum resources which safeguards the needs of future generations". Key implementing

agencies include the Norwegian Petroleum Directorate, the Petroleum Safety Authority Norway, the Climate and Pollution Agency, The Directorate for Nature Management and Petrad (a non-profit Norwegian government foundation working to facilitate knowledge and experience transfer on petroleum management). The OfD also cooperates with consultancies and multilateral institutions such as the World Bank, EITI and IMF. The program may draw upon the competence of Norwegian and international oil and service companies, in line with OfDs Guidelines for Use of the Petroleum Industry. The informant travels regularly to Ghana for meetings, workshops and lectures.

3.3.2 Data Collection

The purpose of this section is to illustrate how and when the data collection took place and how it fits with the overall research schedule.

The research started off with extensive literature review on the topics of knowledge, knowledge management, knowledge transfer and organizational learning, and also in the contexts of emerging economies and institutions. I also did searches online to find relevant companies that had activity in Ghana and that were involved in such a way that information about the research topic could be obtained. Approaching one company led me further to another more “suitable” company until I landed on the three informants mentioned above.

Yin (2009) argues that evidence for case studies may come from six sources: documents, archival records, interviews, direct observation, participant observation, and physical artifacts. However, with respect to interpretive case studies as an outside observer, it can be argued that interviews are the primary data source, since it is through this method that the researcher can best access the interpretations that participants have regarding the actions and events which have or are taking place, and the views and aspirations of themselves and other participants (Walsham 1995). For this reason the chosen method of collecting primary data was through in-depth interviews of three informants. The interviews were guided conversations rather than structured queries (Yin 2009), where questions about “the fact of the matter as well as their opinions about events” (Yin 2009) were asked in addition “to propose his own insights into certain occurrences and may use such propositions as the basis for further inquiry”(Yin 2009).

A second important issue in interviewing concerns reporting media, since it is vital in an interpretive study to 'capture' people's interpretations in as effective way as possible, while at

the same time conducting the normal social interchanges of the interview. One approach is to tape-record all research interviews. The advantage of this is that it provides a full description of what was said, whereas note-taking is necessarily partial. The main disadvantage is that, in the case of confidential or sensitive material, the respondent may be seriously inhibited by the presence of the machine (Walsham 1995). For this research, all interviews were recorded on the researcher's iPhone and in addition notes were taken during the course of the interviews. The note taking helped structuring the interviews because it allowed the researcher to write points that came to mind while the informant was talking, which led to additional questions related to the theory or further inquiry of the informant's response. The interviews were conducted in the offices of the respective informants which allowed the informants to be in their "natural" space, and could help guide and support the conversation with the availability of other materials such as maps, photos, archival documents etc. All three interviews were conducted in a similar fashion. A brief introduction of the research, researcher's background and motivation for the research was given. The informants also replied to an open ended questionnaire sent by e-mail after the interview for further clarifications and additional informational regarding answers.

A key issue for all interviewers is the balance which should be adopted by them between excessive passivity and over-direction. If the interviewer directs the interview too closely, and refuses to allow interviewees to express their own views except in response to questions that are tightly controlled by the researcher, then the data obtained will lose much of the richness of interpretation which is the raw material of sensitive interpretive studies. However, if the researcher is too passive, for example either by not prompting with questions which follow some new direction taken by the interviewee or by not offering his or her own ideas on some particular issue, a number of negative consequences can result (Walsham 1995).

The questions for the interviews were open ended, which "allow the participants to provide a response in his or her own words. Such information maybe more complete and accurate than information obtained with a more restricted question format" (Bordens and Abbott 2002). In addition to having an overview of the literature, the researcher had also gotten an overview of the company by studying websites and documents. This helped in getting a greater understanding of the informants' environment, goals and mission. Taking notes during the interview and the questions prepared in advanced helped to facilitate a continued dialogue with no "awkward" pauses. The data was collected transcribed, categorized, interpreted and finally written up in the report.

3.3.3 Measurement variables and issues

Because you do not manipulate independent variables, you cannot determine the causes of the behavior observed in your case history (Bordens and Abbott 2002). This study focuses only on the perceptions and experiences of the Norwegian consultants. The researcher spent a lot of effort in trying to get data from staff involved in the institution building in Ghana but without success. The study would undeniably been more complete with data from Ghana as the “receiving” part of the context, but due to financial, geographical and time constraints it was challenging to collect data from the Ghanaian side.

3.4 Data analysis

Narrative analysis is the study of stories or a chronological series of events. A personal narrative relating to someone’s experience (Wilson 2010) and is the primary data source for analysis. Due to the interpretive perspective in this study it can be argued that an objective analysis would be limited, as already discussed above referring to Wilson. The theoretical framework for analysis is based on the knowledge creating firm theory supported by factors influencing knowledge transfer. The analysis of data was done by a mix of priori and emergent coding, where the priori codes (deductive) where “determined prior to” (Wilson 2010) my analysis and emergent codes (inductive) where developed “through examining” (Wilson 2010) my data. That advantage of this is that it allows you to look for you specific set of codes while at the same time provides flexibility to note any emergent or unforeseen codes (Wilson 2010). The following codes were used to facilitate analysis and the presentation of findings and discussion:

Main categories	Subcategories/indicators	Theory
Learning environments <i>Ba</i>	Virtual space Physical presence	Nonaka et al.
Knowledge assets	Documents Emotional Licenses Prototypes and designs	Nonaka et al.
Factors influencing knowledge transfer	Trust Distance (culture, power and geographical) Tacitness Retention etc	Various scholars
Other factors not pre-defined	any other element	Possible contribution

Table 2: Categories for interpreting findings

Secondary data collection included research into websites, articles and official documents. The data collection process was iterative in such a way that analysis occurred as the data was collected and lead to further data collection and analysis with constant comparison with the existing knowledge.

3.6 Reliability and Validity

According to Yin (2009), there are four tests that “have been commonly used to establish the quality of any empirical social research. Because case studies are one form of such research, the four tests also are relevant for case studies (Yin 2009). Interpretive researchers are attempting the difficult task of accessing other people's interpretations, filtering them through their own conceptual apparatus, and feeding a version of events back to others, including in some cases both their interviewees and other audiences. The researcher “should [not] be viewed as that of an objective reporter, since the collection and analysis of data involves the researcher's own subjectivity”. So, even if researchers view themselves as outside observers, they are in some sense conducting action research by influencing what is happening in the domain of action, if only by the sharing of concepts and interpretations with the personnel in the field site (Walsham 1995)

The main disadvantage of this is “that the outside researcher will not be present on many occasions, and will not get a direct sense of the field organization from the inside”. In addition, the researcher may sometimes be debarred from access to certain data and issues which are regarded as too confidential or sensitive to be shared with outsiders (Walsham 1995)

Time frame

This research was conducted in the period of February – May 2012.

External validity

This study uses a theoretical framework in able to understand the phenomenon of knowledge transfer and organizational learning from a process point of view (and not a theoretical view where attempting to predict outcome) Thus, generative mechanisms identified for phenomena in the social sciences should be viewed as 'tendencies', which are valuable in explanations of past data but are not wholly predictive for future situations (Walsham).

Reliability

One of the problems related to social sciences is the concept of repeatability. Given that another researcher was given the exact interview question and literature used in this study, would he/she be able to conduct a completely identical study? Furthermore, the organizational setting would have also been altered which would make replication even more difficult. However, reliability in social sciences does not stem from repeatability because the reality is continuously constructed by individuals (Berger & Luckmann 2002), which nullifies the *ceteris paribus* assumption. Therefore, reliability comes from the researcher's ability to portray the research context as much in detail as possible (Marschan-Piekkari et al. 2004). I have argued for the nature of multiple sources of evidence (triangulations), use case study protocol and presented in detail the case study design steps. As a minimum, according to Walsham (1995) is reporting on the collection of field data should include details of the research sites chosen, the reasons for this choice, the number of people who were interviewed, what hierarchical or professional positions they occupied, what other data sources were used, and over what period the research was conducted. This has been accounted for the various sections above.

Summary

In this section I have argued for the choices made concerning methodology and methods. This study was conducted as a qualitative case study guided by interpretivism. The minimum requirements for reporting are accounts on the collection of field data included details of the research sites chosen, the reasons for this choice, the number of people who were interviewed, what hierarchical or professional positions they occupied, what other data sources were used, and over what period the research was conducted. With respect to data analysis, reporting included how the field interviews and other data were recorded, how they were analyzed and how the iterative process between field data and theory took place and evolved over time (Walsham 1995). All the above mentioned requirements are argued for in this section.

4. FINDINGS AND ANALYSIS

4.1 Introduction

The aim of this chapter is to present the findings as they emerged from the interviews conducted with the three informants and secondary data collections. As mentioned in the previous chapter the interviews were guided conversations to uncover challenges in knowledge transfer process between the agents. This section is structured as follows: firstly a brief background of the context is given to provide a better understanding of the setting. Secondly, the learning environments and *bas* are analyzed. Thirdly, knowledge assets and lastly factor influencing knowledge transfer.

4.2 The case

Background

Norway and the Norwegian Oil History

With the Ekofisk discovery in 1969, the Norwegian oil adventure commenced. Production from the Ekofisk field started on 15 June 1971, and in the following years a number of major discoveries were made. Today, there are 65 fields in production on the NCS. In 2009, these fields produced 2.3 million barrels of oil per day (including NGL and condensate) and 102.7 billion standard cubic metres (scm) of gas, resulting in a total production of saleable petroleum of 238.6 million scm oil equivalents (o.e.). In 2008, Norway was ranked as the world's sixth largest oil exporter and the eleventh largest oil producer. In 2008, Norway was the second largest gas exporter in the world, and the fifth largest producer of gas. Petroleum activities have contributed significantly to economic growth in Norway and to the financing of the Norwegian welfare state. Throughout nearly 40 years of business activities, the industry has created values of approximately NOK 8 000 billion in current terms. In 2009, the petroleum sector accounted for 22 per cent of national value creation. The value created by the petroleum industry is almost three times higher than inland based industries and around 22 times the total value creation of the primary industries (Nordvik, Verlo et al. 2010). A fundamental part in the success of Norway gaining competence and knowledge to compete on a world class level can to a large extent be accredited what is known as Technology Agreements. Hansen (1999) state that the intention of the technology agreements "was to persuade the foreign oil companies to conduct more of their R&D in cooperation with

Norwegian firms and research institutions. By doing so, they would promote technology and knowledge transfer in order to prepare and qualify their Norwegian R&D partners for the offshore oil supply market”. Technology Agreements was an important mechanism for the development of the oil and gas industry in Norway. The agreements were one of the conditions (as part of the licensing criteria) put on foreign oil companies who applied for exploration rights in Norway. The main mechanism was to provide R&D-cooperation or support to Norwegian companies and research institutions in order to raise their competence levels (Hansen 1999). These agreements have been instrumental in clusters formations that have stimulated regional development such as Stavanger as the oil capital of Norway. Norway’s management of its petroleum wealth, in what is popularly known as the Norwegian oil model (Kindingstad, Hagemann et al. 2002) is internationally acclaimed today and Norway endeavors to assist developing countries in management of their petroleum resources through the *Oil for development program* (Norad 2011).

Ghana and the petroleum industry development

On 6th March 1957 Ghana became the first country in sub-Sahara to get its independence with Kwame Nkrumah as their first president. Years of political instability and coups followed until 1992 when Ghana re-introduced a multi-party democracy. Elections between 1992 and 2008 have been positive examples of democracy on the continent. The country has developed a highly competitive political environment, and an electoral commission with a good reputation and decent record of organizing elections (European Union Observation Mission 2009). The current president is Dr. John Atta Mills of the National Democratic Congress and Ghana has a population of about 24.791.073 million (2010 est.). Like many other emerging economies, the Ghanaian economy is centered on a few agricultural and mineral products. In Ghana these are cocoa, timber and gold (Nguyen-Thanh and Schnell 2008). A restructure of the economy promoted by the World Bank has pushed for the devaluation of the currency to lower the price of exported commodities, a diversification of the export base, trade liberalization, and privatization of state companies (Nguyen-Thanh and Schnell 2008). Following these policies products like crafts, canned agricultural produce, and semi-processed materials are now being exported

As early as 1896, wells were drilled in and around Half-Assini as a result of oil seeps found onshore Tano basin. Today one can still see some of these seeps at Bokakere. Between 1978 and 1985 oil was produced from the Saltpond field. A number of oil, oil/gas and gas fields

have been found in the Tano basin. In all eighty-nine (89) wells have been drilled in the country. Six (6) discoveries have been made. It is also worth mentioning that 75% of 50 exploratory wells drilled encountered varying degrees of hydrocarbon shows (GNPC). In June 2007, Tullow drilled two deepwater wells offshore Ghana discovering the massive Jubilee field was discovered some 60 km outside the coast – its largest ever discovery and the beginnings of proving up a second new major oil province (Tullowoil 2010). In 2010, the Jubilee field was brought on to production in November, in record time, some 40 months after its discovery. A new major discovery was made at the Enyenra (Owo) and Tweneboa fields in Ghana during the year. On the 25 July 2011, Tullow completed the acquisition of the Ghanaian interests of EO Group Limited for \$305 million, increasing Tullow's interest in the West Cape Three Points license by 3.5% to 26.4% and in the Jubilee field, which Tullow operates, by 1.75% to 36.5%. Other partners in the Jubilee Unit Area are Kosmos Energy (23.49%), Anadarko Petroleum (23.49%), the Ghana National Petroleum Company (13.75%) and Sabre Oil & Gas (2.81%). Tullow also has a 49.95% interest in the Deepwater Tano license which includes the Enyenra and Tweneboa fields. Jubilee is a world class oil field with estimated recoverable resources of up to 1 billion barrels (160,000,000 m³) with further potential. In addition to Jubilee, the two licenses hold significant further exploration potential, which are currently being explored.

Norwegian and Ghanaian Relations

- Norway exported goods for 201 million NOK to Ghana in 2010.
 - Norway imported goods for 65 million NOK from Ghana in 2010.
 - The export increased with 93 % from 2009 to 2010.
 - The import increased with 94 % from 2009 to 2010.
 - Ghana started its oil production in December 2010. This gives increased business opportunities for Norwegian exporters and service delivery in the oil and gas industry.
- (Regjeringen 2011)

Some of the Norwegian service providers to the Ghanaian oil industry are Aker Solution, Intsok, Sintef, InterOil, Ocean Rig and SeaDrill (*informant 2*)

The Oil for Development program in Ghana

In October 2005, Ghana National Petroleum Corporation (GNPC) asked for assistance from the Norwegian Ministry of Foreign Affairs Oil for Development programme. The letter was seconded by former UN Secretary General, Mr Kofi Annan. On behalf of the Norwegian government, Minister for International Development, Mr Erik Solheim, responded favourably (Norway 2009). In October 2007, Ghana, through GNPC, applied for assistance from the OfD

program. Based on the subsequent dialogue and a thorough assessment of the scope for cooperation, a decision was made to make Ghana a core country in the OfD program. In February 2008, a Memorandum of Understanding (MoU) was signed by Ghana and Norway for long-term cooperation within the OfD program. Norway has assisted Ghana in the development of its petroleum policy and the master plan in 2008, followed by technical assistance in the evaluation of the development plan for the Jubilee Field. The Jubilee Unitization Agreement was concluded with Norwegian support. In addition, assistance was provided on reviewing the Jubilee Environmental and Social Impact Assessment. Marine environmental surveys of offshore sea bottom sediments and water columns were carried out by the research vessel Dr. Fridtjof Nansen in 2009. Assistance was given for the application to the UN on extension of the continental shelf beyond 200 nautical miles. In December 2010, cooperation agreements and institutional agreements for five year programs within resource management and environmental management were signed. A two year development program was initiated in 2010, within petroleum management and technical training were initiated by Petrad comprising resource and environment, as well as other sectors and government institutions. In 2010, personnel from the GNPC participated in Petrad's eight-week program on Petroleum Development and Operations and Petroleum Policy and Resource Management in Stavanger.

Funded by Norad, the Norwegian research institution SINTEF has together with several Ghanaian institutions designed a program for the development of governmental framework and training of up to ten Ghanaian companies for delivery of goods and services to the petroleum industry (Norad 2010). A three year implementation program was signed (Sintef 2010) . The OfD is not a financial provider, but a pure competence and capacity building advisory including leadership training and organization development (Informant 3).

Cooperating institutions in Norway	Organization of the sector in Ghana
Ministry of Petroleum and Energy (MPE) Ministry of Environment (MoE) Norwegian Petroleum Directorate (NPD) Norwegian Climate and Pollution Agency (Klif) Norwegian Directorate for Nature Management (DN) The Institute for Marine Research Petrad Petroleum Safety Authority Norway (PSA)	Ministry of Energy (MoE) Ministry of Environment, Science and Technology (MEST) Ghana National Petroleum Corporation (GNPC) – state-owned oil and gas company Environmental Protection Agency (EPA) – advisory and coordinating body

Table 3: Institutions involved in OfD program (Norad 2010)

4.3 Analysis of findings

The aim of this section is to present the findings as they emerged from the interviews. The findings are structured into two main parts. First, the platform and environment for knowledge exchange and learning are analyzed, and secondly the challenges in the knowledge transfer process are analyzed. The subsequent section will then discuss these findings.

4.3.1 Platforms and environments for knowledge exchange and learning

Management starts with framing of policy and law and then it is competence and capacity building of those institutions. That is done in collaboration with our institutions namely The Ministry of Petroleum and Energy, Ministry of Environment, Ministry of Finance with its underlying directorates. So a Ghanaian employee can actually pick the phone and call straight to the ministry or directorate [in Norway] (Informant 3).

The excerpt above describes how an employee can initiate knowledge transfer by calling a member of the Norwegian ministry. According to Nonaka et. al. this form of knowledge creation is taking place in the Dialogic *ba* where the knowledge is externalized where “tacit knowledge is converted to explicit knowledge by transforming tacit knowledge in a public form. It can be articulated through dialogue and reflection using symbolic language and translating”.

Now, when we travel we are there for a week, and then it takes 2 months before we come back again. (Informant 2)

Yes, I am going now to do a 2 day training course at the ministry [MoE] and the national oil company [GNPC] (Informant1)

The two excerpts above illustrate how knowledge exchange takes place in a physical context, originating and dialoguing *bas* (one-by-one or one-to-many). The consultants will do lectures with for example a power point presentation (the power points were sent to the researcher as secondary data). The *bas* can be considered both dialoguing and systemizing since lectures are conducted in a spoken form alongside a presentation that can be stored in a systemic knowledge asset such as a database for later referencing. The verbal part of the interaction belongs to the conceptual knowledge asset where explicit knowledge is articulated through symbols, images and language. According the SECI model, the relevant phases here are

externalization and combination. The interaction last from 2 days to a week with a gap of about two months at least for one of the consultants.

Yes, we also have delegations that come here, where they can spend several weeks by the Norwegian Petroleum Directorate and other ministries (Informant 3)

The excerpts above is an illustration how a group of people are physically present in Norway as a part of the knowledge transfer. In the originating *ba* (face-to-face context) tacit knowledge can be shared through direct experience which corresponds to the socialization phase. In this phase tacit knowledge can happen through a shared common experience of specific skills and know-how. These are in turn experiential knowledge assets belonging to the first step of the socialization (tacit to tacit). On a group level, dialoguing *ba*, tacit knowledge is made explicit (externalization) by sharing concepts through dialogue and sharing of concepts.

We do a lot of workshops where we send experts. And then we do on the job training, so for example if there is a building proposal from an oil company then we can assist the ministries with evaluation in the same way that the Norwegian Petroleum Directorate would have done here in Norway. When it comes to legislation we go with lawyers from the ministries and from advisory companies (informants 3).

The excerpts above illustrate how knowledge is shared through socialization (learning by doing, tacit to tacit) with an actual case. Experts that arrive in Ghana are able to interact with the personnel in originating and dialoguing *bas* (physical presence face-to-face or in groups) where specific and context dependent skills and know-how can be demonstrated and articulated through language and symbols.

4.3.2 Challenges in the knowledge transfer process

Because an election in Norway changes politicians, but do not change the civil service. So when a new government is formed, it is the same people who process the assignments. It's the same civil servant, it's the leadership of the ministry that stay and have the stability which means when the new government comes in the civil service is able to advice about current trends because they are a-political, they are not politicians themselves even if they can be interested in politics, but they remain neutral in the job. (Informant1)

You have to look at the traits that the political and administrative culture etc have. And here, it is where a lot western institution fail. Everything from the World Bank going down. Norad is has the same syndrome.

Norad is has the same syndrome. Partially because of poor quality of the people that travel, but also partially with “now come and see what have managed to do” without thoroughly understanding the foundation (informant2)

Secondly, it can easily affect your self-confidents, and you can easily become a prey for foreign consultants who almost independent of quality are allowed to do work. These consultants often come with point of views that are relevant for developed economies, but they do not take the realities in Ghana into consideration, where you have GNPC with a handful of competent people who are able to handle the policy and laws in oil and gas for example (Informant2).

The first excerpt by informant1 is an illustration of the differences between Norway and Ghana in government structures. Then informant2 shares an opinion about how this effect training and knowledge sharing. Currently there are a lot of consultants that do not have sufficient understanding about the cultures of the country in which they operate. The informant attributes this to “poor quality” which can mean than these consultants do not have enough experience, knowledge or understanding of the Norwegian industry. The characteristics of their attitudes seem to be in the nature of patronizing.

I believe it’s an “academic trap” as a fear of losing face towards your colleagues (informant 2).

This illustrates a trait in organization culture of the Ghanaian ministry. The informant indicates that it might be a culture of fear in making the wrong decision. The consultant can relate to this trait from a different context.

I believe Ghana to some degree... on one side that foreigners look at highly educated Ghanaians with a “top down”-view. The first times I met with GNPC. They said “we appreciate that you talk to us as equals. When the Americans come they believe we have just climbed down from the trees. (Informant 2)

This informant power distance where the Americans seem to have a superiority complex, or belief of “being better”. By “equals” the personnel seem to show appreciation when the informant addresses them with less power distance.

Learning intent

*Our mission is to spread competence, because we can't do training her forever. We need and end to this, so we trying to train the trainer. Not to teach students, because then we can continue doing this forever
(informant 3)*

A strategy is to train the trainers, and share the knowledge with some key individuals that can diffuse it. In Nonaka et al. terms it would mean knowledge creation and sharing through the SECI model the intent that the whole organization would to acquire the knowledge.

Geographical distance

I have also suggested that Norway should offer a long term engagement for experienced Norwegians to work in GNP and Ministry of Energy for at least 6 months. As a kind of shadow for those with responsibility for a particular area, be a part of, assist over a longer period (Informant 2)

The excerpt above illustrate that the informant find the current way of doing training is challenging. As illustrated in the previous section some consultants are present from two days to a week when present in Ghana. The suggestion is to do a program of at least 6 months with shadowing, thus facilitating socialization and externalization sharing experiential and conceptual knowledge assets.

Tacitness

For institution building I believe OfD have used people with limited competence, to do the job in Ghana, to provide assistance with building an independent petroleum directorate, build competence in GNPC and Ministry of Energy. The quality of the Norwegians has been poor. They lack the historical context and the relevant experience. That is way there is a lot of blueprint of consultants' reports that has limited transfer value. And then the situation in Norway in the 70's is very different from Norway in 2000 (Informant 2)

This illustrates that the informant have experienced in a lot of copy-pasting of documents that is not updated with knowledge relevant for the current setting. The informant attributes this to consultants lacking in historical context and relevant experience. According to Nonaka et al. the consultants may lack the tacit knowledge and cannot share knowledge via experiential or conceptual assets but only through systemic knowledge assets and explicit knowledge such as documents and specifications.

So what the biggest challenge is, in these types of countries that find oil and gas, is that there is a huge emphasis on the new resource, often with additional support from international organizations, either civil society or the World Bank. It becomes this overly emphasis on one sector, which money wise can be right, but employment wise is not important. And it's a dilemma that I see no discussion about in Ghana. So this has for me been the greatest challenge, so this has been something I have tried to get through as a message, but I can't do it, I don't think they want to listen (Informant1)

So for me the biggest challenge for me has been, something I have tried to get through as a message, but I don't think they want to listen. I use data from Norway, and show then what it represents for Norway (Informant 2)

... then the whole internal framework in a society get disrupted [about the oil curse]. This they don't understand. We did not understand that in 1972, but we have learnt it during the course of time that this is the reality (informant1)

Despite all the information out there. It is not many countries that have managed to avoid the oil curse. (informant 3)

The informant feels that the biggest challenge is to communicate expectations for the new found oil wealth and the oil curse where by all the strong resources are represented in one sector. Informant1 follows on by saying that Norway did not understand this either, but learned it over time. Absorption capacity addresses difficulties with understanding what is being communicated because of lack of experience. Explicit knowledge seems to not be enough. Informant3 confirms that this is a challenge for a lot of countries. The tacitness of this knowledge makes it hard to transfer.

Knowledge outflow

Knowledge is power. So Africans that have received the information will not share it so easily. They would rather think that I would keep my job if I know more than the others. And then they would share it out in small proportions. It is very little of a typical western leadership style where you delegate and spread knowledge to get the business work. But this [western] is not a style they grasp easily (informant3.)

This excerpt shows a knowledge outflow problem and a difference in organizational culture.

Knowledge retention

When they change governments in Ghana they replace the top of the civil service. Because the new regime wants put their people in position. So if you go back again to when Ghana discovered oil under the previous regime, he got the cheers. The international community started working with him. Norway played an important role in the early stages with the previous government and established a committee (with broad composition) that would to create what would become the foundation for Ghana's future oil policy. They did not finish the work before the election, when the election was over, they were all removed. All those who had worked on this for 2 years were gone. With the exception of a few people. Brand new came in, and you will then have 6-8 months of training (informant1)

What I noticed the last time, the government had very talented guy who was a professor. He was brought in to manage the work regarding the legal aspect, and then I met him again some months after the election, then he had gone back to being a professor at the university and nobody had asked him about all the experience he had gained (informant 1)

I know now that what and to whom I teach, with an exception of a few people at the bottom of the ladder, could be gone in about a year. (Informant1)

These above excerpts illustrate a challenge with knowledge retention. The knowledge is kept amongst the key people in the ministries and due to the cultural difference in governmental and ministry structures between Norway and Ghana. When the key people have received new knowledge it is not diffused to a group of people that might be in position independent of governments.

Knowledge acquisition

And then you have the attitude that “Norway was engaged with the previous government, then we can’t use Norway”. So it took time before the new government established a new relation to Norway. At least a year where Norway was not looked upon as neutral partner, and they were more interested in advice from other countries. So this kind of political process is not unique for Ghana, it’s the developing countries general syndrome. (informant1)

The informant recognizes a challenge with knowledge retention through failure to share and integrate knowledge initiated by others than themselves.

Indigenous fit

The problem is that this foundation is to a large extent also comes, to put it mildly, almost pushed on from the outside world. It is too many experts from so many countries that want the best for Ghana, and they get so much drive and support from the World Bank, the International Monetary Fund, from Norway.. you name it is going to help Ghana get it right, and that in itself can be a challenge because you build a framework that is to large extent coming from the external world and it is not growing out of your own system. (Informant1)

But this is up the Ghanaians. We are very concerned with what we do should have local ownership. So that we are not making any decisions. OfD is an advisory council (informant 3)

The first excerpt illustrate the informant is concerned about fitting with the local context and giving the space for it to emerge out of the local context as opposed to being pushed on with no local grounding. In the second excerpt the informant seems to be aware about the importance of local ownership.

5. DISCUSSION

The data shows that most of the learning happens in the externalization phase, through conceptual knowledge assets and dialoging *bas*, where the tacit knowledge is expressed in explicit forms through power point presentations, lectures and workshops. This type of knowledge creation mostly happens where the consultants travels and spends a few days with the ministries. The interaction is also done via telephone, which in a sense is a virtual medium, the interaction is still taking place in the dialogue *ba*, because it is limited to only describing concepts through language and symbolic speech and not a written document.

From the Oil for Development program there have been a couple of exchanges where groups either came to Norway for over a longer period of time and groups traveled from Norway and conducted on the job training. This allowed for sharing knowledge in socialization and originating *bas*. Some of the findings have been challenging to classify and they seem to belong in overlapping phases where they can be classified in two phases at the same time. I believe this can relate to the analogy drawn by Nonaka et al. that the spiral of learning is moving. At a particular point in time the knowledge creation state can exist in two or more phases. The analysis could possibly also be broken to parallel processes where each element gets analyzed separately. For example in a classroom setting when a consultant is sharing knowledge by speech, reading from a power point and doing a live demonstration. The knowledge creation may exist in socialization, combination and internalization phase at the same time, as an integral part of the learning process, where tacit and explicit knowledge is shared simultaneously.

The duration of the originating and dialoguing *bas* usually last in the range of 2 days up to several weeks at a time. There is limited knowledge sharing that can happen in this time. One of the informants recognized this as a challenge and indicated that it should have been possible to do longer stay, for a minimum of 6 months, where there would have been a greater opportunity for knowledge creation through socializing, where the consultant could do “shadowing” and on the job training. This allows a consultant and a ministry staff to interact in a real life context where tacit knowledge, can become implicit as argued by some scholars or shared through experiential knowledge assets (emotions, trust, passion etc). The petroleum field is a high technological and knowledge intensive industry, and the data shows tendencies of the challenging nature of share this kind of knowledge. If more knowledge exchange could happen in the socialization stage, which is the hardest knowledge to share, it possibly

improve the knowledge creation, and it can be argued that it would be more complete in the form of both tacit and explicit knowledge.

As a part of OfD strategy to train the trainers, they are relying on knowledge creation with some key individuals that can diffuse it to the rest of the organization. This seems to be in line with Nonaka et al. analogy of that knowledge starts with the individual and that this individual passes the knowledge on through the various epistemological and ontological dimension of the SECI model. The goal is that the whole organization would learn by sharing knowledge with a few individuals. The challenge with this is, as has been verified by the interviews, that there is a risk of knowledge retention where the key people are removed because of an election or voluntary job change. Also in the light of organization culture where there are challenges with knowledge outflow and little incentives for knowledge sharing or a belief that knowledge is power “if I know more than the others no one would challenge me in my job”. It is understandable that it is a challenge to train every staff member in the ministry, but an important avenue to explore more is the use of technology such as videos, computer cased training programs, video conferencing and other knowledge assets can be stored in a “live form” mimicking the strength of speech, symbolism and spoken language together with written manuals and documents to capture the knowledge in a format that can easily be stored and retrieved on an individual basis.

A couple of the informants described certain characteristics about consultants such as “poor quality” by not having the enough knowledge about the Norwegian context, indicating lack of tacit knowledge and also having patronizing attitudes. These are important trust-challenges that have an effect on knowledge transfer. This study also shows the importance of not only knowing what you are going to teach, but also know who you are going to teach to and the awareness of the recipients’ context, culture and history. It can be argued that the knowledge creation goes both directions from sender to receiver and receiver to sender with constant adaption to meet one another on a common culture of understand.

Certain concepts such as the oil curse seem to be difficult to share only in an explicit form. As all of the informants mentioned, it is a difficult task to share this knowledge in a way where the message is being understood. “Very few countries have managed to avoid the oil curse”. This indicates that even though certain types of knowledge exist in explicit form with many “living” examples. Some types of knowledge can only be learnt in a tacit way, namely by experiencing. Another, argument can also be the lack of know-how from the sender side in how to make this more understandable in an explicit form. Another concern raised by the

informants was there is “a lot of blueprint of consultants’ reports that has limited transfer value. And then the situation in Norway in the 70’s is very different from Norway in 2000”. Knowledge creation based on outdated information or knowledge that cannot be used is not appropriate use of resources and can at best be considered a waste, but it can possibly lead to decision making based on incorrect grounds.

6. CONCLUSION AND RECOMMENDATIONS

In this study I have examined how knowledge creation happens in an inter-organizational relation and I have also examined factors that have impact on the knowledge creation process. The knowledge creation happens in various phases through socialization, externalization, combination and internalization. This study relied mainly on data from Norway and there is therefore challenging to conclude on how knowledge has been internalized on recipient side. From this study it can be concluded that most of the knowledge creation occurs in the externalization and combination phase where the platform for interaction are in explicit forms such as lecture, power points and documents. There have been some elements of on the job training where groups of Ghanaians have traveled to Norway and groups of Norwegians have traveled to Ghana for up to two weeks, allowing for some socialization in originating *ba*.

To answer the research question it seems that global networks can influence institutions through sharing of knowledge and experience that might be tacit and explicit in nature, to form laws, policies and regulations that can foster knowledge creation through foreign direct investment where MNE bring skills, capabilities and know-how to the context. How the business environment and entrepreneurship will be stimulated, and how society will respond to the challenges lying ahead will, amongst other elements, will be influenced by the way the legal framework is shaped. The formulation and direction of this development will be influenced by the international community and other national stakeholders.

For this to happen, knowledge creation to the institution must also happen. Knowledge creation and knowledge transfer is challenging, especially when there are geographical and cultural distances between the agents. Some points for consideration in term of “train the trainer” concept is be vary of some the findings by Leeuw, Rist et al. (1995) and learning in government agencies.

- The credibility of the internal receiver is important. Because governments and civil services are hierarchical, the receiver of new information must be seen to be credible, and to have access to those who have decision making responsibilities.

- Information that is conveyed in more formats than a formal report has a better chance of being acted on – so that informal contacts and a ‘no surprises’ policy being pursued by evaluators can be very important in securing the reception of message.
- Efforts to the contexts for policy-making change continuously, learning should also never finish.

Relating to the last point, it is recommended that increased use of knowledge assets, in terms of podcasts, community of practice, knowledge exchange websites, videos, computer based learning etc. to improve mining of the organizational mind particularly in turbulent times such as a change of government, staff or other forms of movement of personal. This can increase the speed of the organizational re-learning and diffusion of knowledge on many ontological levels.

6.2 Contribution statements

The knowledge creating firm theory has little empirical evidence form outside of Japan and particularly not from a context where the organization is not profit driven, even though it can be argued that governments’ motivation also is economic development. This research also contributes by applying the theory alongside dimensions of; geographical distance, developed and emerging economy relation and cultural distance (national and organizational).

An interesting factor is that I have seen little discussion about in knowledge management theory that might be a possible contribution is a concern raised by one of the informants which I have labeled *local or indigenous fit*. Is the recipient actually able to utilize the knowledge in the context of current organizational structures, given that the knowledge is well understood and can be shared through experiential, conceptual and systemic knowledge assets? This question remains unanswered in this study.

6.3 Implication for knowledge transfer programs

It is important to consider the timing when establishing such relation to be able to give relevant and crucial information in a critical period such as licensing agreements. Norway demanded 51% interest on the exploration licenses, while GNPC in Ghana has only has 13.75 %. Could early input from the consultants in Norway yield a different outcome? Another consideration is the “local or indigenous fit” of the knowledge. The advice from the consultants was to allow the systems to grow from within, and carefully consider the material distributed. The use of blueprints has limited transfer value.

It is important to consider the use of knowledge repositories to address the concern around knowledge retention and turnover. Artifacts such as computer-based training, video clips,

community of practice that might have an initial cost to develop, but can be reused at almost no cost.

Consultant need to exercise caution and awareness of patronizing attitudes. If there are problems they might not indicate or say it confrontational culture.

6.4 Limitation of the study

6.4.1 Sample population

This research is based on three informants, which can be considered experts and well experienced in the field. Due to the short timeframe, cost and availability of informants it was challenging get more informants. If the time frame was longer allowing for more the study might have revealed other factor.

6.4.2 Time factors

This study was conducted in time frame of January – May 2012.

6.5 Future research

- To conduct a similar study considering the recipient's perspective.
- To do a longitude study of how the advice affects decision-making
- To assess the effect of entrepreneurship based on the certain laws and regulation to contribute to the industry based perspective
- To measure spill-over affects from MNEs and FDI project based that enter Ghana
- What kind of influence do the local communities have on the governments (a bottom up), considering cultural differences with local kingdoms, civil society organizations in Ghana.
- The primary knowledge and competence offshoring and mining. How instrumental was this in contributing to the success of the Norwegian Oil success story?

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Appendices

Appendix 1

The transcribed interviews constitute of 26 pages. Below are the excerpts that are included under findings and analysis as the original statements made in Norwegian.

Citation	
Citation	Jeg har også foreslått at Norge burde tilby en langtids engasjement for erfarne nordmenn som kunne jobbet i GNPC og Ministry of Energy i minst 6 måneder. Som en slags skygger for de som har ansvaret for et bestemt område, være med, bistå over en lengre periode. Nå er det slik at man reiser og er der i én uke, og så tar det 2 måneder for man kommer igjen nesten.
Citation	Så forvaltning begynner gjerne med policy og lover også er det mye sånn kapasitet og kompetansebygging av de institusjonene, og det gjøres i samarbeid med våre institusjoner altså Olje og Energi departementet, Miljøvern departementet, Finansdepartementet og med underliggende etater. Så en Ghanesisk ansatt i Ministry of Energy kan faktisk ta opp telefonen og ringe en her i ministeriet eller direktoratet her hos oss. (informant3)
Citation	Da har mitt forslag vært. Lag sånne match making programmer hvor man går til industriland. En betingelse for at dette oljeselskapet for lov til å komme inn på Ghanesisk sokkel er at de bringer med seg selskaper som lager joint ventures som bygger opp lokal kompetanse for å levere informant 2
Citation	Fordi et valg i Norge skifter politikere, men det skifter ikke embetsverk. Slik at en når en ny regjering kommer inn så er det de samme menneskene som håndterer sakene. Det er den samme embetsmannen, det er lederne av departementet som sitter der og de har en stabilitet i seg og det betyr at når et regjeringsskifte kommer inn så er embetsverket i stand til å orientere seg til noen nye trender fordi de i utgangspunkter er A-politiske de, er ikke politiske selv om de kan være interessert og i sin jobb er de nøytrale. Informant 1
Citation	Ja jeg skal ned nå å kjøre to dagers opplæring av ministeriet i energi og statsoljeselskapet, også vet jeg nå at de jeg nå

	driver å lærer opp, med unntak av et få tall nederst på stigen, kan komme til å være borte om et år (informant 1)
Citation	Ja altså, vi får delegasjoner hit, så de kan være flere uker hos oljedirektoratet og andre departementer. Det går mye på workshops der nede hvor vi sender ned eksperter. Og da gjør vi mye sånn on the job training, så hvis det kommer en utbyggingsplan inn fra et oljeselskap så assisterer vi myndighetene med å evaluere på samme måte som oljedirektoratet (juridiske) ville gjort det her i Norge. [34:35] Når det gjelder lovgivningen så er vi nede med jurister fra departementene fra rådgivende selskap. Vi har brukt mange uker på å gå gjennom disse ulike lovforslagene. Det er Ghaneserne styrer det. Vi er veldig opptatt av det vi gjør skal ha eierskap i landene vi er i. At ikke vi kommer som sårne som blir med helt på beslutningen slik de bare gir opp. OfU er et rådgivende organ.(Informant 3)
Citation	Man har problemer med å kommunisere realiteter fordi politikere vil helst ikke kommentere den type realiteter, for politikere i Afrika er veldig opptatt av det gode, det er veldig sjeldent du ser politikere i Afrika snakke om det vanskelige og det tunge. (Informant1)
Citation culture	Så vet vi jo at det under liggende er drevet veldig mye av relasjoner og nettverksbygging. Oljepenger kan lett brukes til å bygge litt mer relasjoner uten at man nødvendigvis kaller det korrupsjon (informant1)
Citation	Jeg tror Ghana i noen grad er preget av på den ene siden «utlendinger ser på høyt utdannende Ghanesere med litt sånn «ovenfra og ned ad»-syn de første gangen jeg hadde et møte med GNPC. Vi er så glade for å at du snakker til oss som likemenn fordi Amerikanerne kommer hit og tror vi har nettopp klatret ned fra trærne. Informant 2
Citation	Så dette forryker hele det interne mønsteret i et samfunn. Dette forstår man ikke. Dette forstod vel ikke vi i Norge heller i 1972, men etter hvert har vi lært oss at det er dette som blir realiteten. (Informant 1)
Citation	I forhold til institusjonsbygging, men jeg må nok si at OfU brukt mennesker med begrenset kompetanse (konsulenter) til å gjøre jobben i Ghana. Bistå med oppbyggingen av et selvstendig petroleums direktorat, bistå med å trene mannskapet i GPNC og ministry of Energy. Og der har

	<p>kvaliteten på nordmennene som har reist vært for dårlig etter mitt skjønn. De vet for lite om hva som ble gjort i Norge i de relevante situasjonen [mangler historisk bakgrunn] og mangler den relevante erfaringen. Derfor blir det mye blåkopi av konsulent rapporter som har begrenset overføringsverdi. Så er jo situasjonen den at Norge på 70-tallet, er noe langt annet enn Norge i 2000.</p>
	<p>Det andre er at dette kan lett påvirke selvtiliten, og at en derfor blir et lett bytte for alle typer utenlandske konsulenter som nesten uavhengig av kvalitet får lov til å gjøre et arbeid. Disse konsulentene kommer ofte med synspunkter som passer for utviklede land, men de tar ikke hensyn til realitetene i Ghana hvor du da har GNPC med en håndfull kompetente mennesker som er i stand til å håndtere lovgivning innen olje og gass for eksempel (informant 2)</p>
Citation	<p>Problemstillingen er at dette fundamentet i stor utstrekning også kommer, for å si det mildt, nesten på dyttet fra omverdenen. Ved at det er så mange eksperter fra så mange land som vil Ghana vel, og de får så mye bistad/pådriv fra Verdensbanken, fra pengefondet, fra Norge fra you name it.. skal hjelpe Ghana til å få det riktig, og det kan i seg selv være en utfordring lager en måte et rammeverk som i storutstrekning kommer via den eksterne verdene på deg og ikke vokser frem av ditt eget system. (Informant 1)</p>
Citation	<p>Man må se på de særegenhetene som politisk og administrativ kultur osv har. Og der, der er det veldig mange vestlige institusjoner som feiler, alt fra å være verdensbanken og nedover. Norad er preget at det samme syndromet. Delvis gjennom dårlig kvalitet på de menneskene som sendes ut, og delvis litt sånn «nå skal dere se her hva vi har gjort» uten å ha grundig nok satt seg inn i hva er forutsetningen (Informant 2)</p>
Citation	<p>Så det som på en måte for meg er den største utfordringen i denne type land som finner olje og gass, det er at du får en så enorm fokusering på den nye ressursen, ofte med ytterligere støtte fra internasjonale organisasjoner, enten det er sivilsamfunn, eller det er verdensbank, også blir det en overfokusering på én sektor som pengemessig kan bli riktig, men som sysselsettingsmessig ikke er viktig. Og det dilemmaet ser jeg ingen diskusjon om i Ghana. Så det er for meg den største utfordringen, så det har vært noe jeg har forsøkt å legge igjennom som noen budskaper, men jeg klarer ikke, jeg tror ikke de vil høre.</p>

Citation	Når de skifter regjering i Ghana så skifter de toppen av embetsverket. For det nye regimet skal plassere sine mennesker i posisjon. Så hvis du går tilbake igjen, til da Ghana fant olje under det forrige regimet og han fikk jubelen. Verdenssamfunnet begynte å jobbe med ham, Norge spilte en viktig bidragsrolle i den tidlige fasen mot den forrige regjeringen og de etablerte en fagkomite som skulle (med bred sammensetning) lage det som skulle bli grunnlaget for Ghanas fremtidige oljepolitikk. De ble aldri ferdig med arbeidet før valget, når valget var over så var alle sammen fjernet. Alle de som hadde arbeidet med dette i 2 år var borte. Med unntak av et par mennesker. Helt nye kom inn, og man får da 6 - 8 måneders opplæring. (Informant 1)
Citation	Det merket jeg forrige gang, fordi at de i regjeringen hadde en fantastisk flink fyr som var professor. Han var bragt inn i arbeidet med å lede arbeidet med lovgivningen og så traff jeg han et par måneder etter valget da var han gått tilbake igjen som professor på universitet og ingen spurte han om all den erfaringen han hadde fått (informant1)
Citation	Så har man da en sånn holdning om at «Norge var jo engasjert med den forrige regjeringen, da kan ikke vi ikke bruke Norge». Så det tok tid før den nye regjeringen etablerte da en relasjon tilbake til Norge. Minst ett år hvor da Norge ikke var sett på som den naturlige nøytrale aktøren for da skulle de ha andre råd fra andre land. Så denne politiske prosess typen som er i ikke i Ghana alene, dette er utviklingsland generelle syndrom (informant1)
Citation	Kunnskap er makt. Så afrikanere som har fått den informasjonen, deler den ikke lett. Da tenker de at jeg beholder jobben min, hvis jeg kan mer en andre. Også deler jeg den ut i passe små porsjoner. Det er veldig liten form av sånn vestlig ledelse hvor du delegerer å sprer kunnskap for å få bedriften til å funke best. Men den ledelses modellen er det ikke alltid de tar. Noen tar det, og lykkes veldig bra, men jeg tror at for å få den tillitten til at du gir informasjon til medarbeidere og lager fellesskap i en bedrift. Det gjenstår [44:38] Det er litt sånn, det kommer fort. Mange tror at hvis man begynner på scratch så er det en vanlig måte å gjøre det på. I hverfall i den offentlige der kan man sitter som små konger alle sammen ikke sant.(informant3)
Citation	Spre på kompetansen, fordi vi kan ikke drive opplæring her i alle år. Vi må ha en ende på det. Vi prøver å train the trainer-prinsippet. Ikke lære opp elevene, for da kan man holde på i det elendige (informant 3)

Citation	Det er ikke mange land som ikke har gått i the curse. Hvorfor lærer man ikke da? Det er litt sånn personal greed (Informant 3)
	Så det er for meg den største utfordringen, så det har vært noe jeg har forsøkt å legge igjennom som noen budskaper, men jeg klarer ikke, jeg tror ikke de vil høre. Og jeg bruker dataene fra Norge, og viser at dette representerer for Norge, 1/4 av verdiskapningen i Norge i form av penger, for arg GIRP, det representerer i størrelses orden 5% av eksportverdien fra Norge i form av råolje, det representerer bare 9% av sysselsetningen og den sysselsettingen i Norge, de 9% er også da den indirekte sysselsettingen, ikke bare den direkte. I de fleste land som finner olje så er det en sysselsetningsgrad på 3-4 % av befolkningen innen olje. . Og det innebærer at det er 97% som skal ha jobb i andre sektorer
Citation	Decision making Self-confidence
Citation	Ledelsen i visepresidentene og ministrene har jo både sterk formell kompetanse og veldig solid erfaring. Så kompetanse sånn menneske messig ligger der definitivt til rette, men det er noe med at trenger en helt spesiell guts for å tørre å ta en del av disse slagene som nå avgjør stor andel av kaken som bakes i dag
Citation	Jeg spøker av og til med at når jeg synes det går tregt med beslutninger, så er det fordi jeg har aldri har sett en regjering sammensatt med så mange mennesker med doktorgrad, som den nå værende Ghanesiske regjeringen nå har. [Høyt utdanningsnivå]. Jeg tror de er ekstremt gode til å analysere, men jeg tror de er begrenset av den vegringen for beslutninger som akademikere veldig ofte kommer opp i. Det er rett og slett en beslutningsvegring. (informant 2)
Citation	Ambisjonen er de riktige, men det mangler execution. Jeg har forsøkt å finne ut av det selv. Og jeg tror jeg har rett i at det litt på manglende selvtillit og at det ligger en del mennesker som er flinke analytikere og som er vant til å ikke tørre å ta feil. «Akademic trap» av hensyn til dine kolleger.